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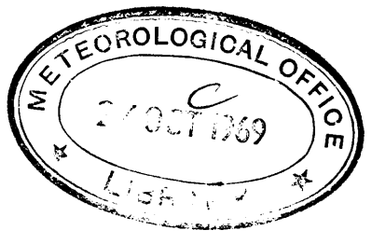

METEOROLOGICAL OFFICE

THE OBSERVATORIES' YEAR BOOK 1967

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Comprising the geophysical results obtained from autographic records and eye observations at the Lerwick, Eskdalemuir and Kew Observatories

LONDON: HER MAJESTY'S STATIONERY OFFICE

1969

Universal Decimal Classification
550.389.5(411)
551.510.42(058)
551.594.(058)

PREFACE

The *Observatories' Year Book*, of which this is the last volume, was published for the years 1922 to 1937 in continuation of Part III Section II and Part IV of the *British Meteorological and Magnetic Year Book* for the period 1908 to 1921. Further publication was resumed eventually after a long interruption of the 1939-45 war but in an abridged form as outlined in the next paragraph.

The General Introduction to the Meteorological Tables and the parts of the Sectional Introductions which dealt with site, instruments, procedure and tabulations included in the volume for 1938 served as the standards of reference up to 1956; only important departures from these standards were mentioned explicitly in subsequent Year Books. The space devoted to the discussion of observations was reduced and the monthly tables of individual hourly values of meteorological elements were discontinued, but summaries of the daily mean values (or totals), monthly means (or totals) of the hourly values and some maximum and minimum values were given. The diary of cloud, weather and visibility, and, after 1939, the aerological and seismological tables were also discontinued, but no major changes were made in the tables of atmospheric electricity and geomagnetism.

Another major review of the contents of the *Observatories' Year Book* was then carried out and a number of important changes made, commencing with the volume for 1957. The meteorological data for Kew and Eskdalemuir were omitted; a punched card system of recording such data centrally, at the Meteorological Office, Bracknell, has been adopted. It was also decided to omit all mention of the seismological work at Kew. Full details of the seismological measurements are given in the *Meteorological Office Seismological Bulletin*, distribution of which was resumed in 1947 after a break of seven years, and are also communicated to the *International Seismological Summary*. There were also some changes in the geomagnetism and atmospheric electricity tables; further changes in these tables were introduced in the 1964 volume. Full details of all the tables are given in the Introduction to the *Observatories' Year Book* 1965.

It may be of assistance to those who make use of the data in this volume to know the full range of the other work now carried out at the three observatories and this is detailed below. Requests for information about this other work should be addressed, unless otherwise stated below, to the Director-General, Meteorological Office, London Road, Bracknell, Berkshire, England.

Lerwick Observatory

Full hourly synoptic observations of the weather. Continuous recording and hourly tabulations of pressure, wind, rainfall, sunshine, temperature, humidity, total and diffuse solar radiation on a horizontal surface, daylight illumination on a horizontal surface and of radiation balance. Daily measurements of smoke pollution in the air and monthly measurements of carbon dioxide. Observations, when applicable, of noctilucent cloud.

Routine radiosonde and radar-wind upper air measurements (twice and four times daily respectively). Daily measurements (from 14 September) of the total amount of ozone. Chemical sampling of the air and rain-water. Sampling for radioactivity of particulate matter in the air near the surface and sampling for radioactivity of rain-water.

There was, until the end of May, a Radio and Space Research Station Unit, attached to Lerwick Observatory, which made some measurements in connexion with its work on radio wave propagation, as well as solar proton measurements, using a neutron monitor, and magnetic micropulsation measurements, using a fluxgate magnetometer. Requests for information about this work should be addressed to the Director, Radio and Space Research Station, Ditton Park, Slough, Buckinghamshire, England. The magnetic micropulsation measurements, using a fluxgate magnetometer, have been continued by Lerwick Observatory.

Eskdalemuir Observatory

Full hourly synoptic observations of the weather and, when applicable, of aurora and noctilucent cloud. Continuous recording and hourly tabulations of pressure, wind, rainfall, sunshine, temperature, humidity, total and diffuse solar radiation on a horizontal surface, daylight illumination on a horizontal surface and radiation balance. Daily measurements of evaporation, smoke pollution in the air, and soil temperatures (at depths of 30 and 122 cm). Chemical sampling of the air and rain-water. Sampling for radioactivity of particulate matter in the air near the surface and sampling for radioactivity of rain-water. Records from a set of the American world wide standard seismographs - 3 components on both short and long period instruments.

Kew Observatory

Three-hourly synoptic observations of the weather, 06-21 GMT. Continuous recording and hourly tabulations of pressure, wind, rainfall, sunshine, temperature, humidity, total and diffuse radiation on a horizontal surface, solar radiation at normal incidence, total and diffuse daylight illumination on a horizontal surface and radiation balance. Continuous recording and three-hourly tabulations (00-21 GMT) of soil temperatures at surface and depths of 5, 10, 20 and 30 cm together with daily measurements at depths of 50, 100 and 122 cm. Daily measurements of evaporation. Daily and hourly tabulations of smoke, and daily tabulations of sulphur dioxide concentrations in the air. Records from a short period vertical seismograph. Daily measurements of the average ionization due to β and γ rays from the earth's surface.

CESSATION OF OBSERVATORIES' YEAR BOOK

This volume is the last to be issued by the Meteorological Office.

551.589 94
Library

Future responsibility for the publication of the geomagnetic data for Lerwick and Eskdalemuir observatories rests with the Institute of Geological Sciences, Exhibition Road, London, S.W.7, England; such data (with those for Hartland observatory, Devon, England) will appear in "Geomagnetic Bulletins of the Institute of Geological Sciences, commencing with data for the year 1968.

The atmospheric electricity data for Lerwick, Eskdalemuir and Kew observatories will appear in the publication of the Hydrometeorological Service of the U.S.S.R "Results of ground observations of atmospheric electricity (the World network)" under the scheme sponsored by the World Meteorological Organization from 1 January 1964.

A general analysis of the auroral data will continue to appear annually in *Observatory*, London, and all available details regarding aurora can be obtained on request from the Balfour Stewart Auroral Laboratory, Department of Meteorology, The University, Drummond Street, Edinburgh 8, Scotland.

The air pollution data for Kew Observatory, hitherto published as Table 40, will, in future, be published (with some additional calculations and some modification of layout and of presentation of period averages) by Warren Spring Laboratory, Ministry of Technology, Gunnels Wood Road, Stevenage, Hertfordshire, England, in their publication "The investigation of air pollution: National Survey Annual Summary Table 1", which is obtainable, on request, from the Director. Comparable information will also be published on hourly smoke values from a site in North London.

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ERRATA IN PREVIOUS VOLUMES

Geomagnetism

Observatories' Year Book 1964

Page 34, Table 1, 19 July	4-5h		for 625 read 635
Page 43, Table 3, November	13-14h	sum	for 956 read 856
		mean	for 399 read 395
	19-20h	sum	for 946 read 1046
		mean	for 398 read 402

Page 107, Table 35, December 1964: The figure for day 14, hour 20-21 is 155 and for hour 21-22 it is 235; in the mean column at the foot of hour 13-14 the figure is (18).

Observatories' Year Book 1965

Page 26, Table 1, January	5-6h	sum	for 1496 read 1196
		mean	for 661 read 651
	17-18h	sum	for 760 read 1060
		mean	for 637 read 647
	maximum	mean	654 at 7-8h not 661 at 5-6h
	minimum	mean	642 at 11-12h not 637 at 17-18h
Table 2, January	19-20h	mean	for 22·0 read 22·2
Page 27, Table 3, January	2-3h	sum	for 983 read 980
		mean	for 387 read 386
18 January		sum	for 439 read 436
	Grand Total		for 213259 read 293256
Page 29, Table 3, 7 February	17-18h		for 439 read 539
	18-19h		for 439 read 539
	19-20h		for 412 read 512
Page 32, Table 2, 12 April	19-20h		for 23·2 read 18·5
	20-21h		for 20·1 read 15·4
		sum	for 94·4 read 85·0
		mean	for 20·6 read 20·2 now minimum value instead of 20·2 on 26th
18 April	19-20h		for 21·0 read 15·9
		sum	for 181·1 read 176·0
		mean	for 24·2 read 24·0
	19-20h	sum	for 138·5 read 128·7
		mean	for 21·3 read 21·0
	20-21h	sum	for 126·4 read 121·7
		mean	for 20·9 read 20·7
	Grand Total		for 15362·2 read 15347·7
Page 35, Table 3, May	9-10h	sum	for 210 read 190
		mean	for 394 read 393
	12-13h	sum	for 134 read 144
		mean	for 391 read 392
	14-15h	sum	for 419 read 429
Page 46, Table 1, 8 November	23-24h		for 665 read 655

ERRATA IN PREVIOUS VOLUMES *(contd)*

Air Pollution

Observatories' Year Book 1966

Page 100, Table 40: All the hourly entries in the row beginning "Year" should be divided by twelve. Delete all present entries and substitute, beginning at hour 0 to 1, as follows:

35 32 29 27 *27* 27 31 38 45 46 43 36 35 34 33 35 40 45 49 52 *55* 53 47 40

INTRODUCTION

A full Introduction was given in the *Observatories' Year Book* 1965 and reference should be made to that Introduction and to the 15 Figures published in that *Year Book*. Only two changes are required to bring this material up to date for 1967 and reference is made below to the pages of the *Observatories' Year Book* 1965.

Page 19. In the second paragraph, second line for "sulphur" read "polytetrafluoroethylene".

Page 23. Substitute for the present third paragraph "During 1965 ..... metre." the following:

"During 1967 the highest measurement of pollution at Kew was 412 microgrammes per cubic metre, this value occurring between 12 and 13 hours GMT on 18 November. For the third successive year since continuous recording began (1 January 1921) the maximum hourly value was below 1,000 microgrammes per cubic metre. The continued fall in smoke pollution values reflects the gradual extension of clean air zones over London."

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LERWICK

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 13,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	692	683	683	684	686	696	699	693	689	685	674	659	667	663	678	685	673	650	664	677	684	678	678	679	679	3299
2	670	673	673	673	668	676	677	678	673	672	672	673	670	676	679	679	682	683	679	687	687	685	683	680	677	3248
3	679	679	683	680	683	685	677	680	679	676	663	660	662	662	677	672	669	673	683	683	683	683	683	682	677	3236
4 *q*	681	680	680	680	680	680	682	682	680	676	669	669	667	672	679	684	685	686	685	681	680	684	683	679	679	3304
5	683	680	680	679	680	683	685	686	685	682	677	676	677	682	680	682	685	686	687	688	689	686	685	683	683	3386
6	682	682	681	687	687	689	689	695	696	689	693	695	693	690	687	689	693	696	696	693	693	693	693	692	691	3573
7 *d*	690	691	693	693	693	696	698	697	689	671	672	680	678	659	693	749	686	659	678	734	667	673	698	651	687	3488
8 *d*	665	762	701	680	598	636	545	561	565	594	612	683	695	707	716	744	830	817	718	663	650	640	639	646	669	3067
9	653	654	663	663	658	646	664	662	662	660	660	659	663	663	666	659	664	666	667	670	666	665	665	659	662	2877
10	659	666	669	672	676	677	679	679	679	675	673	669	668	668	669	669	674	675	663	661	659	664	672	675	670	3090
11	656	667	672	673	678	683	692	692	678	682	675	668	667	656	652	665	676	668	668	668	675	671	678	667	672	3127
12 *q*	668	672	671	674	675	675	676	675	675	675	668	668	668	668	669	672	676	678	681	684	685	685	685	683	675	3206
13 *d*	683	683	684	688	692	697	700	701	692	689	688	684	678	686	677	682	682	687	693	707	738	698	682	592	687	3483
14 *d*	407	255	307	353	385	432	493	572	573	581	656	654	657	652	658	654	662	666	668	669	669	668	668	664	*568*	622
15	666	675	659	663	667	667	666	665	665	662	661	655	668	668	664	668	675	673	665	669	665	671	675	681	667	3013
16	665	669	666	668	674	672	665	679	672	661	658	664	668	677	672	672	673	673	674	677	675	668	665	672	670	3079
17	668	670	668	667	672	672	672	671	671	668	668	671	669	676	678	678	682	679	685	685	686	685	681	676	675	3198
18	672	674	672	675	675	677	679	681	681	681	681	682	682	685	687	676	675	675	678	668	662	671	678	678	677	3245
19	679	678	678	681	682	684	684	682	678	672	672	670	673	677	679	682	688	691	688	685	678	683	678	679	680	3321
20	681	679	678	682	687	685	689	692	678	669	672	674	674	671	680	692	716	723	694	678	678	672	672	672	683	3388
21	666	664	667	667	672	665	671	672	667	659	656	662	669	673	675	673	676	668	673	675	677	681	679	675	670	3082
22	678	675	677	681	682	684	685	683	682	676	672	669	669	672	675	675	676	675	673	673	676	675	682	685	677	3250
23	689	695	691	687	689	697	689	692	689	682	681	684	683	685	687	685	685	685	684	684	687	685	683	682	687	3480
24 *q*	682	683	685	685	686	689	689	689	686	684	681	678	674	676	678	681	682	685	687	689	689	686	682	686	684	3412
25	686	687	692	694	695	698	699	698	697	688	685	684	676	676	676	678	682	685	688	689	691	693	693	692	688	3522
26	690	691	694	692	692	689	687	687	685	681	675	672	676	676	684	686	687	688	688	689	690	689	689	690	686	3467
27	690	690	691	691	694	697	697	694	688	682	681	682	687	690	692	691	693	698	696	695	696	693	691	688	*691*	3587
28	687	682	682	686	690	698	692	694	675	681	673	669	662	665	673	676	682	687	688	684	685	685	687	687	682	3370
29	686	686	688	686	690	695	698	691	682	677	673	675	679	682	685	691	691	688	691	691	688	689	688	688	687	3478
30 *q*	688	688	688	688	688	688	690	692	688	681	673	666	664	672	681	691	692	692	691	690	691	692	694	693	686	3461
31 *q*	692	691	691	691	692	694	695	693	685	675	668	666	666	674	685	691	693	693	695	698	695	695	692	691	688	3501
Mean	669	*668*	668	670	670	674	674	678	674	671	670	672	673	674	678	683	*687*	685	683	683	682	680	681	676	676	
Sum 20,000γ+	733	704	707	763	766	902	903	1008	884	786	781	820	849	899	1031	1171	1285	1248	1168	1184	1134	1086	1101	947		Grand Total 502,860

GEOMAGNETIC DECLINATION (WEST)

Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *d*	14·6	15·6	15·4	16·2	16·0	16·6	16·6	16·0	15·8	16·5	17·6	19·0	22·3	24·3	26·3	24·5	18·3	22·1	17·9	15·7	14·5	11·0	12·8	11·9	*17·4*	317·4
2	11·0	12·9	14·9	12·6	14·0	13·7	13·8	14·7	14·6	14·8	16·8	17·5	18·5	19·4	19·3	17·7	18·5	19·3	15·5	16·5	15·7	15·7	15·4	16·2	15·8	279·0
3	14·8	14·5	13·8	14·7	14·3	13·8	15·8	15·7	15·6	16·7	16·7	19·5	21·8	20·1	21·2	20·3	20·3	17·6	15·6	13·0	15·7	15·6	15·5	14·9	16·6	297·5
4 *q*	14·8	14·9	15·0	15·0	15·4	15·4	15·4	15·4	14·9	14·9	15·7	16·7	17·6	18·5	18·5	17·9	17·6	17·3	17·6	16·8	16·8	15·7	13·9	14·7	16·1	286·4
5	14·0	15·4	15·0	15·4	15·5	15·5	15·7	15·6	15·2	15·8	16·1	17·0	18·6	20·6	19·6	18·0	17·6	17·6	17·4	16·7	16·6	15·9	15·6	15·2	16·5	295·6
6	14·9	15·0	14·9	14·8	14·9	15·6	15·7	15·9	16·3	15·7	16·5	17·6	19·1	19·8	19·4	18·6	18·8	19·0	18·3	17·0	16·6	16·3	16·0	16·2	16·8	302·9
7 *d*	16·3	16·4	16·5	17·5	17·5	17·6	17·7	19·5	17·6	16·6	22·2	22·1	23·4	26·1	22·9	28·6	24·2	16·6	17·3	14·1	15·7	14·7	15·4	24·1	19·2	360·6
8 *d*	15·0	19·1	9·9	2·7	-22·4	5·0	18·8	17·6	14·5	11·5	13·0	17·6	19·7	24·1	29·2	24·2	20·3	20·4	16·2	13·9	14·9	15·1	10·9	9·2	14·2	240·4
9	11·3	13·0	14·9	14·6	14·3	17·6	12·9	13·0	13·0	13·9	14·8	16·5	18·5	17·8	16·1	16·5	16·7	17·1	15·5	15·7	14·7	10·1	12·9	12·0	14·7	253·4
10	13·0	14·7	15·9	16·2	15·8	15·7	14·9	14·8	14·8	14·8	14·8	15·4	16·0	16·6	16·5	16·2	16·0	16·3	14·8	15·0	14·3	14·9	14·3	15·4	15·3	267·1
11	11·8	13·8	15·5	17·5	16·5	17·5	16·4	16·7	17·6	15·8	14·8	15·7	18·2	19·4	18·5	19·6	18·9	13·8	9·1	12·7	14·6	15·5	8·2	10·1	15·3	268·2
12 *q*	13·6	13·8	14·5	14·9	15·5	15·8	15·6	14·9	14·3	13·9	14·3	14·9	16·2	16·8	17·5	17·5	17·2	16·6	16·6	16·2	15·6	15·8	15·6	15·4	15·5	273·0
13 *d*	15·6	16·5	17·6	18·9	17·5	17·8	17·1	16·6	17·6	17·7	17·6	18·3	21·9	26·8	19·5	20·9	20·4	20·8	20·4	17·6	-0·6	8·6	-1·4	-3·6	15·8	280·1
14 *d*	-14·2	-23·3	-44·5	-56·2	5·8	16·3	22·7	19·4	23·0	21·4	14·4	14·9	16·9	16·2	15·2	15·4	16·2	16·2	15·1	14·4	13·6	13·9	13·6	13·0	*7·5*	79·4
15	13·0	14·6	14·2	13·9	14·2	14·0	13·9	13·7	14·1	14·7	15·5	15·7	15·6	17·8	15·6	15·6	15·9	16·1	14·7	16·6	13·1	13·8	12·5	9·8	14·5	248·6
16	10·7	13·0	13·0	14·8	14·8	15·7	18·2	16·7	18·4	17·7	19·9	19·5	19·2	18·6	18·5	18·5	18·7	17·5	16·6	14·8	12·1	13·6	12·1	10·9	16·0	283·5
17	10·8	9·6	11·0	12·5	11·9	12·2	11·9	11·9	12·2	12·7	13·7	15·4	16·3	17·0	16·0	15·0	15·4	14·9	15·9	16·0	14·4	14·2	13·7	13·6	13·7	228·2
18	13·5	13·6	12·7	12·6	12·4	12·5	12·6	12·8	13·2	14·6	15·6	17·5	17·6	17·8	16·7	16·3	16·7	16·6	15·9	12·0	9·5	12·9	13·8	14·5	14·3	243·9
19	13·9	15·4	14·7	14·8	14·8	14·8	14·6	14·6	14·7	15·5	16·4	17·3	17·6	17·6	17·4	16·4	16·3	17·3	17·2	17·1	16·5	14·1	13·3	13·8	15·7	276·1
20	15·2	14·8	14·6	15·4	13·7	13·3	13·6	14·3	14·6	16·2	18·7	19·9	20·3	20·9	25·0	25·8	28·9	30·7	14·9	10·1	12·2	13·5	14·7	14·5	17·3	315·8
21	13·6	13·8	12·8	12·1	11·1	13·6	14·9	13·0	13·8	14·5	16·1	18·5	19·3	18·9	21·4	21·4	19·3	22·2	17·3	15·7	15·2	14·1	14·1	13·7	15·9	280·4
22	11·9	12·8	14·0	14·3	14·0	13·9	13·8	13·9	13·3	13·6	14·1	16·0	16·9	17·7	17·5	16·3	16·1	16·6	16·0	15·7	13·8	13·7	14·6	14·9	14·8	255·4
23	15·7	15·7	14·9	15·6	14·8	14·2	15·7	16·6	14·8	14·7	15·5	16·6	17·6	18·1	17·7	17·5	17·2	17·6	17·3	15·7	16·1	13·9	13·2	14·0	15·9	280·7
24 *q*	15·7	15·8	16·4	16·4	16·2	16·1	15·8	15·4	14·9	14·9	15·4	16·4	17·6	18·7	18·6	17·7	17·4	17·0	16·7	16·5	16·1	14·8	14·7	15·5	16·3	290·7
25	16·4	16·9	16·7	16·9	17·4	16·8	16·6	15·9	15·8	15·7	16·0	17·7	18·5	19·3	18·7	17·2	16·3	15·7	15·7	15·7	15·5	15·6	15·7	15·8	16·6	298·5
26	15·7	16·4	16·0	15·6	15·6	15·0	15·2	15·2	15·0	16·1	16·1	16·5	18·5	19·2	18·7	18·0	17·1	16·7	16·5	16·2	16·1	15·9	15·9	15·9	16·4	293·1
27	16·0	16·2	16·5	16·5	16·2	15·9	15·3	14·7	14·7	15·0	16·2	17·6	18·7	18·6	18·4	18·0	17·7	17·8	17·8	17·5	16·9	16·0	15·7	14·8	16·6	298·7
28	13·2	13·8	16·4	16·8	13·2	14·9	16·2	15·8	17·2	18·5	14·5	16·3	17·8	18·2	17·9	17·6	17·1	16·7	16·5	9·5	12·5	14·1	13·7	15·0	15·6	273·4
29	15·6	17·0	15·7	16·0	15·2	14·8	15·0	14·5	14·5	16·0	16·9	18·2	18·5	18·2	17·5	16·7	16·7	16·1	15·7	14·9	15·4	14·9	14·9	14·9	16·0	283·8
30 *q*	15·7	15·7	15·7	15·7	15·4	14·9	13·8	13·6	13·2	12·9	14·2	16·6	18·8	19·6	19·1	18·1	17·5	16·7	16·4	16·2	16·2	14·9	15·7	15·7	15·9	282·3
31 *q*	15·7	16·0	16·2	16·2	15·2	14·9	14·8	14·2	13·5	13·4	14·3	16·6	18·9	19·5	20·3	18·4	17·6	17·4	17·0	16·6	26·6	16·4	15·8	14·9	16·7	300·4
Mean	13·2	13·7	12·9	*12·6*	13·4	14·9	15·5	15·3	15·3	15·4	15·9	17·3	18·6	*19·4*	19·2	18·7	18·2	17·9	16·3	15·2	14·7	14·4	13·6	13·8	15·6	
Sum 300·0′+	108·8	123·4	100·8	90·9	116·7	161·4	181·0	172·6	172·7	176·7	194·4	235·0	276·4	302·2	294·7	280·4	262·9	254·3	205·4	172·1	156·9	145·2	122·8	126·9		Grand Total 11634·6

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 9000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	441	445	445	445	445	444	441	445	445	446	447	448	445	454	460	505	612	541	507	481	464	460	456	458	466	2180
2	461	460	459	460	457	451	455	457	454	453	453	451	450	450	451	456	455	458	465	461	459	461	461	459	457	1957
3	455	453	449	450	450	449	453	455	456	455	461	461	461	470	466	467	479	469	464	462	458	456	457	454	459	2010
4 *q*	454	453	450	450	452	450	452	453	453	456	455	454	454	452	452	452	450	451	454	459	464	460	460	458	454	1898
5	452	453	453	452	450	450	450	451	450	450	454	454	449	449	454	452	451	452	452	453	453	457	457	457	452	1855
6	457	455	452	449	449	448	447	445	442	446	444	443	445	445	446	446	443	443	445	449	448	450	449	449	447	1735
7 *d*	450	449	447	445	444	443	441	439	441	448	447	447	452	482	499	631	627	518	539	590	518	483	473	450	483	2603
8 *d*	485	541	545	375	258	322	303	338	401	447	484	523	528	525	535	593	617	617	592	553	532	501	483	469	482	2567
9	467	456	442	447	450	439	439	452	456	456	454	460	461	464	471	475	468	470	470	462	464	467	461	461	459	2012
10	454	454	457	459	458	457	456	456	453	458	460	461	462	464	464	464	464	463	471	473	476	469	461	452	461	2066
11	437	432	443	451	454	456	452	450	453	449	453	455	457	469	477	473	474	488	493	490	479	460	442	442	460	2029
12 *q*	447	451	453	454	457	456	458	458	456	457	456	456	459	460	462	464	462	461	460	457	457	455	455	454	457	1965
13 *d*	453	452	451	446	445	447	446	445	446	446	447	449	448	446	460	457	460	460	463	465	489	521	532	384	457	1958
14 *d*	301	252	233	316	249	289	252	333	419	453	458	477	485	489	489	488	484	480	476	472	468	466	466	467	*407*	762
15	467	461	468	467	466	466	466	464	464	461	461	464	461	467	467	466	466	469	481	484	486	481	479	463	468	2242
16	458	457	457	457	458	458	456	453	453	457	456	460	466	464	472	476	477	480	481	481	481	484	484	476	467	2202
17	472	469	467	467	464	463	464	464	464	461	460	463	459	459	459	460	460	464	463	464	465	469	467	467	464	2134
18	466	463	462	458	459	460	459	460	460	457	455	459	459	459	463	467	470	469	470	480	479	470	462	459	464	2125
19	454	454	457	457	457	457	460	462	464	466	463	461	459	459	459	458	457	457	461	471	489	483	476	467	463	2108
20	466	463	461	453	446	451	452	453	460	460	459	459	461	466	475	495	559	632	635	583	554	520	500	482	*494*	2845
21	477	467	448	444	441	442	448	457	461	465	466	464	465	466	466	479	494	497	486	483	477	470	469	470	467	2202
22	463	449	448	456	457	458	457	459	462	463	462	462	462	461	463	462	463	464	470	470	470	471	463	462	462	2077
23	457	449	451	451	452	451	452	449	451	455	455	455	453	454	455	457	456	456	456	457	455	458	459	459	454	1903
24 *q*	458	457	455	454	454	451	452	452	452	455	457	456	457	458	458	459	457	456	453	453	452	456	457	456	455	1925
25	453	455	453	452	450	450	449	447	449	451	452	452	453	454	458	463	463	459	457	454	451	451	450	451	453	1877
26	451	452	452	453	454	455	454	452	452	452	454	455	456	458	459	460	459	458	457	454	453	452	452	453	454	1907
27	453	454	456	456	457	454	454	454	450	449	449	447	446	446	449	452	454	452	451	450	450	450	451	450	451	1834
28	452	453	451	446	437	426	425	429	442	438	445	451	453	454	458	462	461	462	463	472	466	457	454	451	450	1808
29	450	449	445	449	452	454	454	454	454	445	445	446	453	454	455	458	459	463	460	458	457	454	454	452	453	1874
30 *q*	452	452	454	454	455	455	457	457	457	458	454	452	450	451	453	453	454	456	459	459	458	456	453	452	455	1911
31 *q*	450	452	451	451	453	453	454	456	458	459	459	454	451	450	450	451	452	454	454	455	455	455	455	455	454	1887
Mean	452	450	449	446	*440*	442	441	445	451	454	456	458	459	461	465	474	*481*	478	478	476	472	468	465	456	459	
Sum 13,000γ+	1013	962	915	824	630	705	658	799	978	1072	1125	1199	1220	1299	1405	1701	1907	1819	1808	1752	1627	1503	1398	1139		Grand Total 341,458

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — JANUARY 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1 *d*	2112 3421	16	2112 3321	15	1011 2411	11	1001 1531	12	2	14
2	2101 1022	9	1100 1011	5	2101 1022	9	0100 0010	2	1	14
3	1111 2320	11	1101 2210	8	0111 2320	10	1001 1200	5	1	13
4 *q*	0000 0011	2	0000 0010	1	0000 0011	2	0000 0000	0	0	14
5	1000 1001	3	0000 0000	0	1000 1001	3	0001 0000	1	0	13
6	0011 0110	4	0011 0110	4	0001 0000	1	0010 0000	1	0	14
7 *d*	0022 3556	23	0022 3556	23	0022 3336	19	0011 3544	18	2	14
8 *d*	6645 3653	38	6635 3651	35	5643 3433	31	5654 3443	34	2	14
9	2222 2212	15	2211 2211	12	2222 2112	14	2221 1111	11	1	13
10	2000 0111	5	1000 0111	4	2000 0011	4	1001 0002	4	1	14
11	2121 2333	17	2121 2222	14	2111 1333	15	2001 2232	12	1	14
12 *q*	1000 0000	1	0000 0000	0	1000 0000	1	1000 0000	1	0	14
13 *d*	1121 4156	21	0120 4146	18	1111 4155	19	0001 2046	13	2	14
14 *d*	8754 1100	26	8754 1100	26	6753 1100	23	6763 1110	25	2	14
15	3001 2123	12	3001 1112	9	2000 2023	9	1001 1012	6	1	14
16	2120 1021	9	1120 1011	7	2110 0021	7	1001 0001	3	1	14
17	1111 1111	8	1101 1101	6	1110 1111	7	0000 0000	0	1	14
18	1000 0121	5	0000 0121	4	1000 0121	5	0000 0011	2	1	15
19	2000 0121	6	0000 0120	3	2000 0011	4	1000 0021	4	1	15
20	0121 2431	14	0121 1330	11	0111 2431	13	0110 1543	15	2	15
21	1211 1310	10	1101 0200	5	1211 1310	10	2020 0110	6	1	15
22	2001 1011	6	1000 0000	1	2001 1011	6	2100 0000	3	1	15
23	1110 0012	6	1110 0000	3	1010 0012	5	1000 0000	1	1	14
24 *q*	0000 0001	1	0000 0001	1	0000 0001	1	0000 0000	0	0	15
25	0001 1000	2	0000 1000	1	0001 1000	2	0000 0000	0	0	14
26	0001 1000	2	0001 0000	1	0001 1000	2	0000 0000	0	0	14
27	0001 0100	2	0001 0100	2	0001 0000	1	0000 0000	0	0	12
28	2212 0031	11	0211 0010	5	1212 0031	10	0221 0010	6	1	15
29	1010 0010	3	0010 0000	1	1000 0010	2	0100 0000	1	0	15
30 *q*	0000 0000	0	0000 0000	0	0000 0000	0	0000 0000	0	0	15
31 *q*	0000 0001	1	0000 0000	0	0000 0001	1	0000 0000	0	0	14
								Mean	0·84	14

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 15,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	688	689	693	692	688	693	701	699	691	679	666	659	661	666	660	684	688	689	691	694	694	695	692	692	685	1444
2 *q*	691	691	691	692	693	694	694	692	689	680	672	671	674	675	676	681	683	688	692	679	676	688	692	693	685	1447
3 *q*	693	692	692	693	694	694	693	692	691	680	673	672	675	675	680	685	689	692	695	695	698	695	695	695	689	1528
4	696	696	697	698	698	697	701	703	700	693	688	679	682	678	687	688	679	686	692	689	689	682	679	659	689	1536
5	648	646	663	675	683	693	696	699	689	683	676	671	671	675	673	692	663	680	685	684	681	681	686	686	678	1279
6	685	683	683	682	691	692	693	693	690	686	677	671	672	669	674	677	682	679	683	688	692	690	690	686	684	1408
7 *d*	688	688	689	690	692	693	695	694	689	685	679	676	675	679	685	696	713	730	719	870	730	716	588	609	*695*	1668
8 *d*	646	587	569	598	605	639	659	670	663	643	636	639	659	666	669	663	676	674	672	671	673	675	682	666	*650*	600
9	660	673	658	656	667	670	671	665	665	659	657	655	651	655	659	666	669	674	675	675	675	673	675	673	666	976
10 *q*	675	675	676	675	677	682	682	680	679	672	664	660	663	670	674	677	682	686	686	686	686	686	686	685	678	1264
11	684	685	683	687	689	683	691	694	686	677	662	663	666	674	679	686	688	685	687	687	686	686	686	685	682	1379
12 *q*	685	685	685	686	688	691	692	693	687	678	669	662	664	669	675	681	685	690	689	689	689	686	686	689	683	1393
13 *q*	686	685	686	687	689	689	686	688	689	682	673	666	668	675	683	692	699	692	692	690	679	679	676	673	683	1404
14	677	676	679	682	686	687	687	686	684	673	662	657	663	670	678	685	686	689	693	692	685	683	681	683	680	1324
15	683	680	682	682	684	686	687	686	685	678	672	669	670	673	680	686	692	693	693	696	695	686	686	693	684	1417
16 *d*	718	709	700	707	708	707	696	688	683	655	626	699	715	719	713	662	652	679	704	655	653	651	643	646	683	1388
17 *d*	648	648	634	615	636	662	662	662	654	649	647	642	658	662	670	668	660	668	665	666	670	686	671	673	657	776
18	669	669	667	668	671	674	678	676	672	668	662	658	652	662	669	672	673	675	677	677	678	678	679	679	671	1103
19	679	679	679	681	681	682	683	681	679	675	662	638	655	663	670	680	681	677	684	691	682	685	684	694	677	1245
20	679	680	680	680	685	684	684	686	686	678	668	665	668	671	674	676	682	685	685	690	691	685	682	686	680	1330
21	688	687	687	686	687	688	688	689	690	688	678	672	672	674	672	676	684	685	684	675	679	678	680	675	682	1362
22	675	677	684	681	681	681	684	681	683	681	674	673	675	669	669	678	686	688	688	684	685	686	686	685	681	1334
23	681	681	680	685	686	685	685	689	691	681	675	674	675	678	679	684	704	761	777	714	667	659	662	664	688	1517
24	665	668	669	672	673	675	676	672	663	655	651	654	659	662	669	674	679	680	681	681	675	678	684	689	671	1104
25 *d*	688	688	689	691	686	688	687	697	686	674	665	660	663	669	680	683	698	702	678	678	680	687	684	681	683	1382
26	672	671	659	673	679	684	688	688	683	675	666	657	660	669	678	688	683	679	682	685	688	686	686	685	678	1263
27	686	686	686	686	687	691	690	686	679	671	658	642	652	658	665	677	682	679	688	685	686	691	692	691	679	1294
28	690	688	687	687	687	691	694	691	688	672	660	652	657	662	675	685	688	692	694	696	697	695	695	695	684	1418
Mean	679	677	676	678	681	685	687	686	683	674	665	*663*	667	671	675	680	683	689	690	*691*	684	684	679	679	679	
Sum 18,000γ+	1023	962	927	987	1071	1175	1223	1220	1114	870	618	556	675	787	915	1042	1126	1277	1331	1362	1159	1145	1008	1010		Grand Total 456,583

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 300·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	13·9	13·9	13·8	12·2	12·2	12·9	12·3	13·6	13·6	14·4	15·6	17·6	21·1	21·9	21·2	19·1	17·7	17·6	17·4	16·7	16·2	15·9	15·7	15·1	15·9	81·6
2 *q*	15·0	15·6	15·7	15·4	15·0	14·8	14·7	14·1	13·6	14·2	14·8	17·0	18·9	19·1	19·1	18·4	17·6	17·0	16·6	16·1	14·1	14·9	15·9	16·2	16·0	83·8
3 *q*	16·1	15·7	15·5	15·2	15·0	14·8	14·5	14·3	14·4	14·8	16·6	19·7	20·3	20·3	19·4	19·3	18·5	17·9	17·5	16·7	16·6	16·4	13·8	15·1	16·6	98·4
4	16·4	16·5	16·1	15·7	15·7	16·3	16·5	15·4	14·0	13·6	14·9	17·6	20·6	20·3	20·1	23·1	21·3	17·6	17·6	17·0	16·6	14·9	0·9	1·4	15·8	80·1
5	−2·0	9·5	8·2	11·8	11·1	12·2	14·5	14·9	14·6	14·1	15·3	17·6	19·0	20·5	18·9	22·2	19·8	18·0	16·3	15·6	15·0	13·7	14·1	15·7	14·6	50·6
6	16·0	16·1	15·6	17·0	16·2	14·3	14·4	14·3	15·3	14·7	15·4	17·7	20·1	20·3	19·4	18·8	18·5	18·7	17·5	17·6	16·0	16·4	12·5	10·1	16·4	92·9
7 *d*	15·2	16·6	16·2	15·7	15·4	15·4	14·8	14·7	14·0	14·0	15·5	16·8	18·0	19·3	20·2	20·5	24·6	25·5	32·1	29·0	15·0	24·5	9·3	0·1	*17·6*	122·4
8 *d*	5·4	5·5	2·2	10·9	−8·0	4·8	13·2	13·6	19·1	21·9	18·9	17·5	18·6	21·3	20·3	16·9	15·8	17·6	19·1	19·1	16·2	8·2	−2·8	4·7	*12·5*	00·0
9	6·7	7·7	11·2	13·8	14·3	14·6	14·8	12·6	12·2	12·6	13·6	16·0	18·0	19·4	19·1	18·2	17·0	16·2	16·1	15·7	15·7	14·3	13·2	14·4	14·5	47·4
10 *q*	13·6	14·4	14·3	14·5	15·1	14·3	13·8	13·7	13·4	13·3	14·1	16·5	17·2	18·5	19·0	18·0	16·8	16·3	16·2	15·8	15·0	14·7	15·0	15·1	15·4	68·6
11	15·3	15·1	15·2	15·1	14·5	16·8	19·3	13·4	12·2	12·3	14·6	17·6	20·9	20·7	19·8	19·0	18·5	17·2	16·6	16·2	12·9	14·0	14·4	15·0	16·1	86·6
12 *q*	15·6	15·5	15·5	15·4	15·2	15·1	15·1	14·4	13·6	13·1	14·4	15·8	17·8	19·2	19·1	17·9	17·2	16·7	16·5	16·4	16·1	13·9	13·0	14·7	15·7	77·2
13 *q*	14·6	14·9	14·8	14·8	14·6	14·6	13·8	13·6	13·2	12·6	13·6	15·3	17·7	19·5	20·2	19·7	19·0	22·2	22·6	21·0	20·2	14·6	11·0	11·0	16·2	89·1
14	9·4	11·4	11·8	12·7	12·5	12·0	13·2	13·2	13·4	13·3	15·7	18·5	21·2	21·8	20·5	18·5	17·6	17·4	17·6	17·5	16·6	16·4	14·3	12·4	15·4	68·9
15	12·1	12·9	13·0	13·8	14·8	14·0	14·4	14·2	13·4	13·9	14·7	16·4	18·8	20·5	20·9	19·8	18·8	18·3	18·3	17·9	17·7	15·5	14·8	15·0	16·0	83·9
16 *d*	17·1	14·8	11·7	13·5	13·6	14·1	13·3	14·2	11·3	12·4	13·4	16·2	18·1	23·1	23·5	18·1	15·7	15·1	3·6	12·9	9·9	9·3	11·0	12·4	14·1	38·3
17 *d*	14·2	13·5	16·1	14·7	17·9	17·1	17·0	16·9	16·7	13·2	15·9	17·0	19·5	21·5	22·3	19·0	18·3	15·6	14·9	16·0	15·6	13·7	11·2	12·0	16·2	89·8
18	12·2	14·1	13·7	14·0	15·3	13·8	15·7	14·7	13·6	13·3	14·6	17·7	17·8	17·7	18·2	17·6	17·3	16·2	16·0	15·8	15·0	14·9	14·7	14·9	15·4	68·8
19	14·9	14·9	14·8	14·9	14·9	15·3	14·8	13·6	12·0	12·1	13·3	16·8	19·9	21·7	21·1	21·6	19·9	17·5	17·0	14·3	15·8	16·1	15·3	12·0	16·0	84·5
20	12·9	13·6	13·5	13·5	13·2	12·2	13·6	13·6	12·9	12·6	13·8	16·3	19·0	20·4	20·2	19·3	18·6	18·0	16·8	17·0	16·3	14·1	15·1	15·4	15·5	71·9
21	15·1	14·7	14·0	14·2	14·1	14·2	13·9	13·6	12·3	12·9	14·2	16·9	19·7	22·5	23·1	20·3	21·0	18·6	18·8	19·4	16·9	14·7	13·6	10·9	16·2	89·6
22	10·5	11·0	12·1	11·7	12·2	11·9	11·3	11·8	11·8	13·6	14·8	18·0	21·5	22·5	22·2	21·5	21·1	22·0	23·3	19·9	16·9	16·0	15·7	14·9	16·2	88·2
23	13·2	14·8	14·1	14·8	14·6	14·5	13·8	13·8	14·0	16·7	20·7	21·6	23·2	22·8	23·5	23·5	22·9	20·9	24·6	19·8	8·6	10·6	14·2	15·0	17·3	116·2
24	15·4	15·0	14·9	14·5	14·1	13·5	13·2	12·0	12·0	12·2	14·5	17·8	20·1	20·6	19·5	18·3	16·9	15·9	14·5	12·0	10·8	14·0	13·8	14·8	15·0	60·3
25 *d*	15·3	16·0	15·5	14·9	14·5	17·1	13·1	13·4	12·2	11·5	14·0	20·0	19·1	21·1	20·9	19·0	18·8	14·8	12·0	15·0	13·9	14·9	14·7	12·3	15·6	74·0
26	3·1	0·4	5·5	12·2	14·1	8·8	12·6	11·9	10·6	10·6	12·4	16·2	17·9	20·1	19·5	18·8	14·0	15·4	14·7	13·3	13·8	12·3	12·6	13·6	12·7	4·4
27	16·2	16·2	16·5	16·2	15·2	13·6	13·5	13·2	11·5	11·9	14·8	16·6	19·9	21·0	20·8	19·8	17·6	13·7	11·9	14·0	14·9	15·6	15·6	15·6	15·7	75·8
28	15·5	15·3	16·1	15·7	14·9	14·3	13·3	12·5	11·6	11·3	13·7	17·0	19·4	21·0	21·3	20·4	19·2	18·2	17·9	17·5	17·5	14·9	16·0	15·5	16·3	90·0
Mean	12·8	13·4	13·5	14·2	13·7	13·8	14·2	13·8	13·3	13·5	14·9	17·3	19·4	20·7	20·5	19·5	18·6	17·7	17·3	17·0	15·2	14·6	12·8	*12·7*	15·6	
Sum 300·0′+	58·9	75·6	77·6	98·8	82·2	87·3	98·4	85·2	72·5	77·1	117·8	185·7	243·3	278·6	273·3	246·6	220·0	196·1	184·0	175·2	125·8	109·4	58·6	55·3		Grand Total 10483·3

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	453	452	441	441	446	446	446	447	451	454	454	454	450	450	454	458	458	458	457	457	457	456	456	454	452	850
2 *q*	452	452	451	451	452	454	454	455	457	459	456	455	454	457	457	456	456	456	457	466	473	466	459	456	457	961
3 *q*	455	454	453	452	452	453	454	455	455	455	454	454	453	453	453	453	453	452	451	452	452	454	454	454	453	880
4	451	451	450	450	450	449	446	446	447	451	451	451	455	459	459	468	468	459	452	457	459	463	444	415	452	851
5	401	405	376	431	436	439	448	449	453	454	448	449	450	452	453	461	484	465	456	454	454	454	450	450	*445*	672
6	452	452	452	450	441	444	445	445	445	446	449	449	450	454	454	457	457	458	454	454	450	450	450	450	450	808
7 *d*	447	450	451	451	450	449	446	446	446	445	443	441	445	446	449	450	466	603	548	586	531	502	330	383	463	1104
8 *d*	451	458	327	283	314	382	416	430	439	456	467	501	531	507	518	492	479	471	463	471	479	475	446	447	446	703
9	442	451	453	451	454	454	450	455	460	463	464	463	467	467	468	471	472	469	468	467	466	467	467	463	461	1072
10 *q*	465	466	466	466	463	461	462	461	461	461	461	458	458	457	459	464	466	464	462	462	460	458	458	459	462	1078
11	458	458	460	460	458	453	415	424	437	446	452	455	458	458	460	461	463	466	463	463	463	458	455	453	454	897
12 *q*	453	456	457	458	458	458	457	454	456	457	454	456	453	452	455	457	458	458	460	459	458	462	458	454	457	958
13 *q*	454	457	457	458	458	458	457	455	454	455	453	451	449	448	450	457	462	470	475	480	492	492	484	476	463	1102
14	470	466	461	460	454	453	456	457	458	462	459	459	457	457	458	458	461	460	458	461	466	470	472	467	461	1060
15	465	462	461	462	461	460	458	458	458	458	457	452	449	449	450	454	456	458	460	460	460	470	468	462	459	1008
16 *d*	443	449	453	453	453	451	452	452	451	451	461	510	571	561	554	533	515	534	541	516	517	505	458	464	*489*	1748
17 *d*	465	464	453	426	424	447	462	467	468	469	468	473	471	475	473	500	500	493	486	482	475	456	452	453	467	1202
18	455	455	459	460	457	457	456	457	458	461	461	462	469	468	464	465	465	465	465	466	466	466	465	465	462	1087
19	464	464	461	461	461	461	461	463	465	465	464	462	464	462	462	463	462	464	464	462	465	465	465	458	463	1108
20	464	464	463	462	460	461	461	461	460	459	458	457	457	457	457	461	461	464	465	461	462	465	465	465	461	1070
21	462	461	460	459	456	455	454	452	450	448	450	454	457	462	464	468	481	482	485	492	492	491	481	481	467	1197
22	477	464	460	459	459	456	455	454	452	451	451	451	453	457	464	468	468	470	481	502	503	493	481	472	467	1201
23	467	456	457	460	460	457	456	454	450	452	448	450	450	463	477	499	533	596	601	595	528	487	475	468	485	1639
24	467	469	472	472	471	470	467	467	467	464	463	461	462	464	464	467	468	467	468	470	474	465	461	456	467	1196
25 *d*	458	459	461	461	462	432	429	436	446	454	453	453	453	453	456	460	469	510	523	510	495	476	464	443	463	1116
26	404	387	399	427	448	463	459	458	455	455	454	454	454	453	455	469	491	484	480	473	461	459	452	451	452	845
27	448	452	455	458	460	460	460	460	462	463	460	458	454	455	459	463	471	479	476	471	466	457	455	454	461	1056
28	451	454	453	451	455	454	455	457	455	455	454	454	453	450	450	455	458	458	456	457	457	458	454	452	454	906
Mean	453	453	*447*	448	449	451	451	453	454	456	456	459	462	462	464	467	471	*480*	478	479	474	469	456	455	460	
Sum 12,000γ+	694	688	522	533	573	637	637	675	716	769	767	847	947	946	996	1088	1201	1433	1375	1406	1281	1140	779	725		Grand Total 309,375

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — FEBRUARY 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1	1111 1100	6	0011 1000	3	1111 1100	6	1100 0000	2	0	15
2 *q*	0000 0021	3	0000 0021	3	0000 0011	2	0000 0011	2	0	15
3 *q*	0001 0001	2	0001 0001	2	0001 0001	2	0000 0000	0	0	15
4	0111 1314	12	0101 1213	9	0011 1314	11	0000 0103	4	1	14
5	4211 2311	15	3211 2310	13	4211 2201	13	3201 1201	10	1	14
6	0111 1113	9	0110 1112	7	0111 1003	7	0100 0001	2	1	14
7 *d*	2000 1467	20	0000 1467	18	2000 1456	18	0000 0547	16	2	15
8 *d*	6533 3234	29	6533 3232	27	5533 3224	27	6533 2323	27	2	14
9	3221 0001	9	2210 0001	6	3121 0001	8	1010 0000	2	1	14
10 *q*	0000 0000	0	0000 0000	0	0000 0000	0	0000 0000	0	0	13
11	0232 2121	13	0111 1111	7	0232 2121	13	0221 0001	6	1	13
12 *q*	0000 0002	2	0000 0001	1	0000 0002	2	0000 0001	1	0	14
13 *q*	0000 0222	6	0000 0121	4	0000 0222	6	0000 0111	3	1	14
14	2001 1012	7	0000 0010	1	2001 1002	6	0000 0000	0	0	14
15	1100 0003	5	0000 0003	3	1100 0002	4	0000 0002	2	1	13
16 *d*	3135 5443	28	2135 5443	27	3135 4343	26	1024 3333	19	1	13
17 *d*	3312 2223	18	2312 2213	16	3210 1222	13	1200 1101	6	1	13
18	1111 1000	5	0010 1000	2	1111 1000	5	0000 0000	0	0	13
19	0001 1222	8	0000 1212	6	0001 1122	7	0000 0000	0	1	13
20	1110 0121	7	0000 0111	3	1110 0021	6	0000 0000	0	0	14
21	0001 2221	8	0000 2211	6	0001 2221	8	0000 0000	0	1	14
22	2001 1121	8	1001 1111	6	2001 1121	8	0000 0021	3	1	14
23	2002 2455	18	1002 2451	15	2001 1253	14	1000 2441	12	1	14
24	0011 0121	6	0011 0121	6	0000 0020	2	0000 0000	0	1	14
25 *d*	0322 1322	15	0321 1221	12	0312 0322	13	0220 0322	11	1	13
26	4212 2212	16	2211 2210	11	4112 1212	14	2200 0210	7	1	14
27	0111 1330	10	0001 1210	5	0111 0330	9	0000 0110	2	1	14
28	0011 1101	5	0010 1100	3	0011 0001	3	0000 0000	0	0	14
								Mean	0·75	14

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 16,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	697	695	688	691	687	694	695	698	692	679	669	662	666	680	688	681	688	685	689	692	692	694	695	694	687	491
2	694	691	691	691	693	693	694	695	690	681	672	658	656	660	675	678	682	679	691	694	693	693	695	691	685	430
3	692	691	690	691	689	695	696	695	690	685	672	655	661	674	668	671	681	688	692	695	695	694	694	700	686	454
4	691	691	687	687	691	695	704	698	688	678	667	659	665	675	682	679	681	687	695	697	695	695	695	701	687	483
5	691	688	690	692	689	695	701	691	685	673	661	651	657	665	697	707	701	678	684	684	689	685	681	685	684	420
6	678	684	674	691	688	685	688	688	682	674	662	658	665	659	667	675	687	681	691	694	697	695	694	695	681	352
7	694	694	694	695	695	694	698	698	691	673	665	668	666	665	681	688	689	692	692	695	692	695	695	696	688	505
8 *q*	695	694	692	694	694	694	693	691	685	674	665	663	665	670	676	703	681	686	693	697	697	700	700	700	688	502
9 *d*	698	695	695	695	695	699	700	701	700	678	673	670	663	671	682	679	698	695	688	703	685	678	688	695	689	524
10	672	667	684	692	689	685	683	675	677	671	668	661	659	668	682	688	688	694	692	696	695	695	696	695	682	372
11 *q*	695	694	694	693	695	696	698	695	684	669	659	656	662	670	681	688	690	692	694	697	697	698	696	696	687	489
12 *q*	695	695	694	692	692	693	692	691	685	672	662	658	662	669	679	689	694	692	694	698	699	700	700	701	687	498
13	700	698	697	699	698	699	701	699	695	681	671	668	665	674	682	685	689	692	695	698	702	698	699	702	691	587
14	707	697	695	695	693	697	697	695	685	668	659	659	665	674	674	681	686	695	692	699	707	695	693	692	687	500
15 *q*	692	692	691	692	692	697	698	698	692	679	669	663	663	668	676	682	685	692	699	701	705	704	704	702	689	536
16 *q*	698	698	697	698	698	700	701	699	692	681	674	668	669	674	684	692	697	703	707	707	711	710	701	701	*694*	660
17	698	698	697	701	700	703	701	697	688	680	674	668	665	672	685	691	697	701	706	704	706	698	701	706	693	637
18 *d*	701	701	701	694	698	712	710	714	703	691	674	671	658	662	674	678	671	693	691	688	694	694	688	687	689	548
19 *d*	677	675	669	681	688	700	697	684	683	673	664	661	670	683	691	701	718	783	710	701	692	631	638	671	685	441
20 *d*	658	659	666	658	667	682	680	671	664	665	662	664	655	664	680	691	698	714	701	692	691	687	687	680	*677*	236
21	691	677	667	680	684	684	684	681	677	674	671	664	658	666	674	676	681	688	696	691	688	677	687	683	679	299
22	677	685	681	688	690	684	684	680	671	663	658	654	655	661	676	681	685	688	691	692	697	694	692	694	680	319
23	694	694	694	694	694	696	697	695	688	678	671	667	664	665	673	688	681	690	710	694	686	678	687	695	686	473
24	694	692	693	694	695	697	700	699	690	674	664	654	651	652	653	670	684	692	695	698	697	700	701	701	685	440
25	701	701	701	699	698	698	699	697	685	670	658	651	654	664	674	680	691	694	698	698	698	698	701	700	688	508
26	705	699	700	699	699	701	701	698	688	677	665	661	662	668	671	678	697	692	700	704	707	711	716	711	692	610
27 *d*	704	710	711	708	698	698	701	707	697	673	668	669	665	672	650	672	696	695	697	701	703	712	699	697	692	603
28	694	694	694	694	699	697	700	698	681	659	648	648	653	665	681	698	700	694	694	694	694	694	694	694	686	461
29	691	694	694	691	693	697	697	689	680	663	645	645	655	664	669	683	700	694	701	701	701	702	701	685	685	451
30	700	701	692	681	698	703	701	701	691	675	661	654	654	667	674	690	699	708	705	697	691	688	686	665	687	482
31	683	685	686	688	692	694	695	690	678	667	658	651	653	659	670	680	687	697	701	702	701	700	700	701	684	418
Mean	692	691	690	691	693	695	696	694	686	674	665	*660*	661	668	676	685	690	695	696	*697*	697	693	694	695	686	
Sum 20,000γ+	1457	1429	1399	1438	1471	1557	1586	1508	1277	898	607	459	481	700	969	1223	1402	1554	1584	1604	1597	1492	1505	1532		Grand Total 510,729

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 300·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	15·0	14·9	16·6	14·9	14·1	13·1	12·2	12·0	11·2	12·0	14·7	18·5	22·7	25·9	24·5	21·5	20·3	18·5	17·5	17·1	16·6	16·0	15·7	15·4	16·7	100·9
2	14·9	14·9	14·8	14·9	14·6	13·8	13·3	13·1	12·9	13·4	16·1	19·8	22·9	22·9	24·1	21·5	21·3	19·1	17·7	17·1	16·6	13·8	13·8	15·3	*16·8*	102·6
3	15·4	15·4	15·0	14·8	15·2	14·4	13·3	12·3	11·2	11·7	14·8	18·5	22·2	25·6	27·5	18·8	18·8	17·6	17·6	17·5	17·3	16·2	14·8	12·8	16·6	98·7
4	12·5	15·4	13·3	13·5	13·4	13·1	13·1	14·1	12·2	12·9	14·1	17·3	20·1	21·7	21·7	19·4	17·7	18·5	18·9	18·2	17·1	16·8	15·9	9·9	15·9	80·8
5	10·6	13·3	14·8	13·6	14·8	12·9	12·9	12·7	12·3	13·2	14·5	17·3	21·8	22·3	25·5	25·7	23·1	20·1	18·3	18·1	17·1	14·6	4·9	13·8	16·2	88·2
6	14·1	14·8	14·8	14·4	12·0	13·1	14·4	14·1	12·9	13·2	13·7	16·6	22·9	22·3	21·3	19·8	18·9	16·9	16·9	14·9	11·0	11·3	15·5	15·5	15·6	75·3
7	15·5	15·1	14·9	14·7	14·7	14·7	14·0	13·1	12·6	12·9	14·6	20·2	23·3	23·1	21·9	20·2	18·7	18·5	17·9	16·8	16·2	15·6	14·9	14·9	16·6	99·0
8 *q*	14·9	14·9	14·8	14·5	14·0	13·8	13·7	12·7	11·5	11·3	13·0	15·6	18·0	19·3	19·2	19·1	18·8	17·7	17·6	17·7	16·6	16·8	16·5	15·6	15·7	77·6
9 *d*	15·8	15·6	14·7	14·6	14·5	14·5	14·3	13·6	11·9	12·6	14·0	18·7	20·6	24·2	25·8	23·3	22·9	20·0	19·1	19·1	14·0	10·3	11·3	14·0	16·6	99·4
10	18·7	6·7	9·5	11·5	10·9	12·1	11·7	12·1	11·6	11·8	14·2	16·5	19·1	20·2	20·5	19·7	18·2	17·4	14·3	14·2	16·3	15·5	15·3	15·1	14·7	53·1
11 *q*	14·9	14·6	14·4	14·4	14·3	14·2	14·0	13·0	11·4	12·1	14·2	16·9	19·9	20·9	20·5	18·6	17·3	16·9	16·4	16·1	16·0	15·5	15·2	15·0	15·7	76·7
12 *q*	15·0	14·8	14·5	14·3	14·2	14·0	13·3	12·1	10·8	12·4	13·6	17·0	20·8	22·6	21·6	18·9	17·0	16·9	17·1	16·9	16·4	15·9	15·6	15·5	15·9	81·2
13	15·3	15·3	15·2	15·1	14·7	14·3	14·2	13·6	12·3	12·9	16·4	19·9	22·3	22·4	22·0	19·7	18·2	17·7	17·7	17·9	16·4	15·9	14·3	10·6	16·4	94·3
14	15·4	14·4	14·2	13·6	14·2	13·2	12·4	11·4	10·4	12·2	15·1	17·2	20·1	20·9	20·7	19·1	18·0	16·6	15·2	16·8	13·1	11·4	12·7	12·4	15·0	60·7
15 *q*	12·4	14·0	13·9	13·3	13·2	12·7	12·3	12·2	11·5	12·4	14·6	17·4	20·7	21·3	20·8	18·9	17·7	16·2	16·3	16·3	16·4	16·1	15·6	15·5	15·5	71·7
16 *q*	15·2	15·2	15·2	14·8	14·5	14·1	13·4	12·4	11·5	12·4	14·9	18·3	21·4	23·2	23·0	21·7	19·8	18·1	18·2	16·9	16·1	16·4	16·4	16·4	16·6	99·5
17	15·6	15·2	14·7	14·9	14·2	14·2	14·2	12·9	11·9	12·8	14·6	17·0	19·7	20·7	20·6	18·6	17·3	17·7	17·7	17·7	17·7	16·9	16·1	15·0	16·2	87·9
18 *d*	15·5	15·1	15·0	16·0	15·6	12·4	11·6	11·3	11·6	13·4	14·9	20·9	24·7	26·7	27·3	25·0	20·8	18·5	9·0	12·0	9·6	13·1	11·5	12·5	16·0	84·0
19 *d*	12·3	12·3	9·4	11·6	10·3	10·5	10·6	10·3	10·3	11·0	13·8	16·8	22·0	24·2	24·0	25·6	21·9	13·6	13·7	14·5	13·5	8·1	1·9	11·0	*13·9*	33·2
20 *d*	9·4	9·6	11·8	16·4	15·2	9·2	9·3	10·3	11·9	14·3	15·2	18·5	22·5	22·1	22·4	20·8	18·0	18·0	18·0	17·0	14·7	15·6	9·7	10·3	15·0	60·2
21	9·6	11·6	16·9	11·3	12·2	12·4	12·4	11·0	10·7	11·6	14·2	17·1	20·5	22·7	21·8	19·9	18·2	16·8	15·5	13·3	12·7	14·2	14·5	7·7	14·5	48·8
22	10·4	8·5	11·5	11·6	11·6	11·5	13·3	12·0	10·9	12·1	14·1	16·4	19·3	21·6	22·0	20·1	18·0	16·9	16·3	16·1	16·2	16·0	15·4	15·3	14·9	57·1
23	15·2	15·0	14·6	14·4	14·2	13·6	13·2	11·7	11·3	11·9	13·6	15·8	18·0	19·4	20·5	20·2	17·0	16·1	15·4	16·3	14·8	9·2	13·0	14·1	14·9	58·5
24	15·3	15·5	15·3	14·8	14·4	14·1	13·3	11·3	9·5	9·9	12·4	16·0	19·7	22·2	21·4	21·0	21·3	16·9	16·3	16·2	16·0	15·6	15·6	15·4	15·8	79·4
25	15·3	15·3	15·3	15·2	15·0	14·7	13·5	10·8	9·9	10·8	14·2	17·5	21·8	23·7	23·1	20·8	19·4	17·7	16·8	16·5	16·0	14·3	14·4	15·7	16·2	87·7
26	15·1	15·1	14·9	14·5	14·3	13·8	12·9	10·9	9·1	9·9	11·6	15·8	20·8	23·6	23·6	22·5	20·9	18·3	17·8	17·3	17·2	17·0	17·0	15·2	16·2	89·1
27 *d*	16·1	10·6	11·0	10·6	16·6	15·6	12·3	10·5	11·5	13·8	15·0	19·2	22·4	25·1	22·2	22·6	21·7	15·9	16·9	16·3	14·0	10·7	15·4	16·1	15·9	82·1
28	15·6	15·4	15·2	15·4	15·6	17·2	15·8	13·1	11·5	11·5	15·4	18·2	20·8	23·0	23·1	20·5	18·0	16·1	15·9	15·9	15·9	15·4	15·2	15·2	16·5	94·9
29	15·6	15·6	15·6	15·8	15·5	15·0	13·3	9·9	8·5	9·4	12·0	16·3	22·9	26·3	25·7	23·4	20·8	15·2	16·6	15·8	15·4	15·2	15·2	15·8	16·3	90·8
30	15·5	15·6	18·0	18·0	14·8	13·3	11·6	10·1	9·6	9·6	13·8	18·4	22·6	25·2	22·6	20·1	18·2	16·1	9·6	13·0	13·8	13·5	17·0	11·2	15·5	71·2
31	10·1	11·9	13·3	13·9	13·8	13·5	12·4	10·3	9·6	10·8	13·3	16·8	19·7	21·4	21·3	19·6	18·2	16·4	14·5	15·2	15·2	15·6	15·9	16·1	14·9	58·8
Mean	14·3	13·9	14·3	14·2	14·1	13·5	13·0	12·0	*11·2*	12·0	14·2	17·6	21·2	*22·8*	22·7	20·9	19·2	17·3	16·3	16·3	15·3	14·5	14·1	14·0	15·8	
Sum 300·0′+	142·2	131·6	143·1	141·3	136·6	119·0	102·2	70·9	46·0	72·2	140·6	246·4	356·2	406·7	402·2	346·6	296·4	236·9	206·7	204·7	175·9	148·5	136·2	134·3		Grand Total 11743·4

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	451	451	455	437	434	447	446	450	453	455	449	444	443	442	452	458	457	457	457	456	456	455	452	452	450	799
2	451	451	451	451	451	451	451	451	450	450	448	448	446	446	450	463	474	474	464	460	461	459	452	451	454	904
3	450	450	450	450	449	446	448	450	452	451	448	448	442	445	449	450	452	456	456	457	461	462	462	452	451	836
4	447	438	443	447	448	449	448	449	452	453	450	448	446	449	452	457	458	454	450	451	455	455	455	442	450	796
5	437	438	442	445	439	430	431	440	446	450	450	448	446	447	455	489	515	509	484	470	461	463	452	443	455	930
6	434	413	412	422	438	442	440	443	447	452	453	451	451	456	460	456	456	462	456	455	450	450	448	447	446	694
7	451	451	451	451	450	447	447	447	450	451	447	443	447	446	447	447	447	447	447	447	448	448	452	451	448	760
8 *q*	452	452	451	451	450	447	447	447	449	450	447	442	438	435	439	450	451	453	450	449	450	449	450	453	448	752
9 *d*	454	454	454	452	453	453	452	452	452	455	454	452	460	455	465	466	469	490	493	481	495	471	463	445	*462*	1090
10	354	395	434	432	433	447	451	449	450	451	449	450	450	453	456	460	462	462	464	462	458	456	453	453	*445*	684
11 *q*	454	457	457	457	457	456	454	455	457	454	452	452	448	449	450	454	455	456	454	453	453	452	453	453	454	892
12 *q*	453	455	457	457	458	458	456	456	456	453	452	449	445	445	449	453	457	457	455	453	453	452	451	452	453	882
13	453	453	455	457	457	457	457	457	457	451	446	445	445	441	446	457	464	464	467	469	466	464	460	451	456	939
14	436	437	450	454	455	454	454	456	455	450	446	444	444	443	448	450	451	455	461	457	453	453	452	451	450	809
15 *q*	449	449	451	452	453	449	448	449	449	448	446	442	440	441	445	450	453	453	453	449	449	448	446	446	448	758
16 *q*	447	449	449	450	450	450	450	450	450	447	444	442	439	440	441	445	450	453	454	453	450	449	448	449	448	749
17	448	449	449	448	449	449	449	452	452	450	447	443	443	443	444	447	447	448	450	450	450	454	454	446	448	761
18 *d*	446	446	447	446	450	427	431	434	438	437	440	438	446	454	466	488	494	479	502	502	491	459	436	417	455	914
19 *d*	414	414	396	404	411	412	427	447	454	458	458	456	456	467	488	502	522	546	497	520	516	474	427	438	459	1004
20 *d*	424	419	435	436	413	434	451	461	458	458	461	461	470	466	462	466	477	484	500	505	495	479	428	434	457	977
21	439	440	387	427	446	452	457	460	461	458	455	457	453	453	458	461	461	459	465	470	472	464	431	419	450	805
22	439	441	453	449	447	451	453	455	458	458	458	455	453	451	451	456	454	454	451	453	453	454	457	457	453	861
23	456	456	456	454	453	453	451	453	453	453	454	452	451	448	450	456	466	460	462	468	471	474	464	456	457	970
24	457	458	457	458	456	454	454	456	456	456	453	449	444	448	451	452	456	456	452	453	453	453	452	452	454	886
25	453	453	454	454	453	452	452	452	452	452	452	451	448	450	451	454	454	453	454	454	453	454	450	450	452	855
26	446	450	452	454	453	452	451	453	452	450	447	444	443	446	450	454	455	462	457	453	450	447	446	448	451	815
27 *d*	415	383	417	426	426	426	437	438	435	437	434	434	444	456	470	467	482	507	484	470	463	449	444	448	445	692
28	450	452	454	457	456	456	454	454	457	458	454	453	454	458	466	478	485	484	477	472	464	458	454	450	461	1055
29	450	452	454	455	455	455	458	458	455	450	453	450	453	458	466	470	481	490	476	470	468	463	455	453	460	1048
30	452	451	447	422	427	417	449	453	452	448	445	444	443	448	458	459	460	467	487	484	477	466	431	396	449	783
31	424	438	447	450	453	456	459	462	462	459	453	449	448	447	449	454	457	458	463	463	462	461	457	453	453	884
Mean	*441*	442	444	445	446	446	449	451	452	452	450	448	448	449	454	460	465	*468*	466	465	463	458	449	445	452	
Sum 13,000γ+	686	695	767	805	823	819	913	989	1020	1003	945	884	879	926	1084	1269	1422	1509	1442	1409	1357	1195	935	808		Grand Total 336,584

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — MARCH 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magnetograph house °C
1	2111 2100	8	1110 2100	6	2111 1100	7	1100 1100	4	1	13
2	0001 1102	5	0001 1101	4	0001 1102	5	0000 0111	3	1	7
3	0102 2112	9	0002 2112	8	0101 2102	7	0001 1001	3	1	5
4	2111 1102	9	1110 1102	7	2011 1102	8	1000 0102	4	1	12
5	2211 3303	15	1111 3302	12	2211 1203	12	2110 2322	13	1	14
6	2212 1222	14	2000 1211	7	2212 1122	13	2200 1110	7	1	14
7	0012 2111	8	0011 2011	6	0012 2101	7	0000 0001	1	1	15
8 *q*	0010 0000	1	0000 0000	0	0010 0000	1	0000 0000	0	0	15
9 *d*	0012 2233	13	0012 2233	13	0012 2233	13	0001 1224	10	1	15
10	4210 1120	11	4210 1110	10	4200 1120	10	4200 0000	6	1	14
11 *q*	0010 1000	2	0010 1000	2	0010 0000	1	0000 0000	0	0	14
12 *q*	0010 1100	3	0000 1100	2	0010 1000	2	0000 0000	0	0	15
13	0012 2112	9	0012 2111	8	0011 1112	7	0001 1001	3	1	14
14	1010 0121	6	1010 0111	5	1000 0021	4	2000 0010	3	1	14
15 *q*	1000 0000	1	0000 0000	0	1000 0000	1	0000 0000	0	0	13
16 *q*	0000 0022	4	0000 0012	3	0000 0021	3	0000 0001	1	0	14
17	0000 1011	3	0000 1011	3	0000 0000	0	0000 0001	1	0	14
18 *d*	0222 2232	15	0222 2221	13	0212 1132	12	0211 2223	13	1	14
19 *d*	2321 2545	24	2321 1545	23	2211 2444	20	3320 3544	24	1	14
20 *d*	3211 2223	16	2211 2223	15	3201 1113	12	2210 1214	13	1	14
21	3101 2123	13	3101 2123	13	3100 1023	10	4300 0013	11	1	15
22	2010 0010	4	2000 0010	3	1010 0000	2	2000 0000	2	0	15
23	0000 0232	7	0000 0232	7	0000 0112	4	0000 0112	4	1	14
24	0000 2100	3	0000 2100	3	0000 1000	1	0000 0000	0	0	14
25	0000 1101	3	0000 1100	2	0000 0001	1	0000 0000	0	0	14
26	1000 1211	6	1000 1210	5	1000 0001	2	0000 0000	0	1	15
27 *d*	3322 3333	22	2212 3312	16	3322 2333	21	4110 2322	15	1	15
28	0111 2201	8	0011 2201	7	0111 1000	4	0001 1111	5	1	14
29	0000 1310	5	0000 1300	4	0000 1210	4	0001 1211	6	1	14
30	2211 2123	14	2211 2123	14	2111 0123	11	1210 0114	10	1	14
31	1000 0001	2	1000 0001	2	1000 0000	1	2000 0000	2	0	14
								Mean	0·68	14

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 16,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	697	692	692	693	696	697	699	696	696	673	653	649	651	663	666	662	680	703	709	737	759	705	687	686	689	541
2	692	690	689	690	690	690	689	686	679	666	663	663	654	653	676	680	709	707	707	706	700	690	683	686	685	438
3	684	672	679	689	690	690	690	683	676	666	661	657	658	666	673	680	686	691	696	700	702	702	700	701	683	392
4	700	701	700	716	719	700	700	701	696	680	663	654	658	689	682	690	686	687	690	687	690	694	694	693	690	570
5	694	692	685	689	690	686	684	680	673	663	654	637	643	654	682	699	700	700	694	702	697	700	702	703	683	403
6	696	694	684	690	685	695	682	687	677	661	657	656	664	662	680	693	703	702	697	699	702	697	702	705	686	470
7	700	692	677	686	694	692	686	690	678	667	662	660	666	677	686	699	697	699	702	713	702	700	700	700	689	525
8	699	697	695	692	693	695	690	683	673	663	659	656	657	667	676	677	686	699	707	707	703	704	703	697	687	478
9	694	691	686	692	693	693	690	686	677	662	651	655	652	658	670	677	683	690	697	705	706	706	705	698	684	417
10	700	698	695	694	700	700	699	694	686	672	661	657	660	677	690	693	704	715	718	710	701	693	696	697	692	610
11	695	693	696	694	694	695	694	687	676	661	649	640	650	661	667	684	700	707	712	706	701	696	697	692	685	447
12	696	685	688	683	697	700	697	692	680	670	663	661	659	664	673	683	691	699	704	708	709	707	707	703	688	519
13 *q*	699	697	696	694	698	700	698	690	673	654	643	640	646	658	673	689	697	705	710	710	710	708	706	703	687	497
14 *q*	703	702	700	700	701	701	697	690	676	658	647	648	656	664	680	697	703	702	707	710	713	715	712	713	691	595
15	710	709	706	705	706	705	702	694	684	673	662	658	662	671	682	695	709	716	719	723	709	713	706	713	697	732
16	706	702	701	703	704	709	709	702	683	665	659	660	673	671	689	721	715	717	722	711	689	697	702	699	696	709
17	689	680	669	648	701	698	691	686	673	648	639	642	662	678	677	697	706	707	716	715	709	709	703	709	685	452
18	709	697	695	693	692	693	690	681	670	658	653	655	663	680	683	683	696	716	716	716	715	707	706	682	690	549
19 *d*	668	673	669	647	696	693	690	688	650	624	637	653	651	667	692	716	695	693	713	716	702	689	690	690	*679*	302
20	684	688	680	679	690	692	687	689	677	661	658	654	662	666	689	698	713	720	719	728	709	698	696	696	689	533
21	690	688	684	690	702	709	699	694	679	657	652	653	657	665	693	703	708	717	713	713	710	705	697	693	690	571
22 *d*	709	687	687	672	673	703	675	666	643	627	637	644	654	657	672	709	718	716	729	729	709	702	700	700	684	418
23 *d*	695	700	705	697	697	698	696	684	673	663	664	666	673	686	716	743	798	832	833	741	716	703	699	690	*711*	1068
24 *d*	686	678	582	675	661	686	696	689	670	644	637	653	658	698	709	715	705	727	755	723	704	702	689	696	685	438
25	657	679	686	660	674	696	693	678	658	643	637	621	651	672	686	693	695	702	706	706	706	707	705	699	680	310
26 *q*	700	698	698	696	693	693	690	682	670	659	650	647	657	670	684	693	701	710	707	707	705	703	703	703	688	519
27 *q*	702	703	702	702	699	697	694	684	666	653	648	656	666	684	701	701	708	710	705	708	709	709	707	706	693	620
28 *q*	705	704	703	700	700	703	700	694	681	667	660	663	675	690	703	709	713	715	716	713	714	712	705	706	698	751
29	703	701	703	703	704	704	699	689	672	659	653	658	656	676	677	701	729	715	725	729	722	719	716	706	697	719
30	700	696	703	706	709	707	700	691	677	664	654	658	658	666	676	690	703	716	713	715	713	709	709	710	693	643
Mean	695	693	688	689	695	697	693	688	675	659	653	*653*	658	670	683	696	705	711	*715*	713	708	703	701	699	689	
Sum 19,000γ+	1862	1779	1635	1678	1841	1920	1806	1636	1242	781	586	574	752	1110	1503	1870	2137	2335	2457	2393	2236	2101	2027	1975		Grand Total 496,236

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 300·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *d*	15·0	14·4	14·5	14·2	13·8	13·4	12·7	11·0	9·3	12·1	16·8	21·1	24·8	27·1	28·5	24·6	21·7	20·1	18·9	19·7	22·7	14·4	11·0	12·2	*17·3*	114·0
2	14·5	13·9	12·9	13·1	13·3	13·3	11·6	9·6	11·5	14·2	16·5	21·1	23·4	23·7	23·5	20·4	17·9	13·5	13·7	14·3	11·9	9·9	13·3	16·0	15·3	67·0
3	15·8	16·7	18·2	12·9	11·7	11·5	11·4	10·5	10·5	11·5	13·4	15·9	18·9	20·1	20·0	18·7	17·7	16·9	16·9	16·4	16·3	16·3	16·4	16·0	15·4	70·7
4	14·8	14·1	13·4	12·7	11·4	8·9	11·6	11·2	11·1	12·4	13·4	16·9	22·2	26·6	24·9	23·0	19·6	16·3	16·7	14·2	13·4	15·3	16·0	15·0	15·6	75·1
5	14·9	13·6	11·6	12·7	12·4	13·6	14·9	13·6	10·3	10·8	12·2	16·2	20·5	20·7	20·9	19·4	14·1	15·8	16·3	16·3	15·3	14·1	14·2	12·8	14·9	57·2
6	12·6	11·8	14·7	14·2	16·1	14·2	15·1	14·2	11·6	12·3	14·7	18·8	23·5	23·6	23·3	18·6	16·7	16·5	17·0	16·4	15·0	15·0	14·1	15·0	16·0	85·0
7	13·2	11·2	15·8	14·9	13·1	12·3	12·5	11·7	11·7	12·2	14·6	18·4	21·0	22·1	20·6	18·9	17·2	16·4	17·4	10·6	14·8	15·9	15·5	15·1	15·3	67·1
8	15·0	16·1	16·4	14·5	13·1	11·9	11·0	10·3	10·1	11·3	13·1	17·0	20·6	22·2	21·5	19·6	18·0	16·4	14·7	14·1	12·9	12·7	13·3	13·8	15·0	59·6
9	16·1	11·2	16·3	13·3	12·9	12·4	11·8	10·9	9·5	10·2	13·3	18·8	22·1	22·6	20·9	19·4	18·6	17·0	16·0	15·9	16·3	15·6	12·6	13·1	15·3	66·8
10	14·2	13·0	12·7	15·0	11·3	10·7	9·8	8·5	8·5	9·5	12·7	15·7	19·1	22·3	22·2	20·7	19·3	18·8	18·5	13·9	11·7	15·0	14·7	15·1	14·7	52·9
11	14·4	14·2	14·1	13·6	13·3	12·8	11·2	9·1	8·0	9·2	12·4	16·5	21·3	23·7	22·3	20·5	18·9	16·8	15·6	15·4	15·4	14·8	11·7	10·1	14·8	55·3
12	10·5	8·0	8·4	14·9	11·7	11·2	11·0	10·1	10·3	11·4	13·5	17·4	20·9	23·5	22·4	20·4	18·1	16·4	15·6	15·6	15·6	15·8	14·6	14·3	14·7	51·6
13 *q*	14·1	14·2	12·5	11·9	11·6	11·1	10·5	9·7	9·6	11·5	14·6	18·8	22·1	23·4	22·2	20·3	18·2	16·9	16·8	16·7	16·5	15·6	16·8	15·6	15·5	71·2
14 *q*	14·2	13·6	12·3	11·5	11·6	10·8	9·6	7·7	7·8	9·6	13·0	16·4	19·6	21·2	21·0	20·4	18·9	17·8	17·2	17·1	17·5	17·2	16·7	16·1	14·9	58·8
15	15·6	15·4	14·5	14·2	13·3	12·4	11·3	11·3	11·8	13·2	15·2	17·5	20·8	22·6	20·6	18·6	18·0	18·0	18·0	18·2	18·0	18·0	15·7	15·0	16·1	87·2
16	14·2	13·0	12·0	12·4	10·2	11·0	12·3	12·9	11·5	13·6	16·8	20·4	25·7	26·2	23·8	23·4	20·8	19·4	17·9	15·1	10·1	15·0	16·1	14·7	16·2	88·5
17	10·5	4·8	1·4	8·3	9·4	8·7	9·4	8·8	9·6	13·4	17·2	18·1	20·5	22·6	21·7	18·2	18·2	18·2	17·2	18·0	17·9	17·1	16·0	14·1	14·1	39·3
18	9·8	11·1	11·2	10·4	11·1	11·1	8·9	8·9	10·7	14·7	17·9	22·4	25·3	26·3	24·7	22·2	18·7	17·8	15·7	15·6	16·8	14·7	14·1	6·3	15·3	66·4
19 *d*	0·8	1·7	-0·9	6·5	-1·6	3·6	6·3	5·3	10·5	16·2	19·8	23·3	24·8	26·3	25·9	21·4	19·6	16·8	17·0	15·2	8·9	11·7	11·6	13·1	*12·7*	3·7
20	13·3	13·3	12·6	15·0	11·1	9·1	7·7	7·5	8·7	12·2	16·3	19·8	23·6	24·6	22·6	20·8	18·9	16·9	19·6	8·9	13·5	13·3	14·3	15·3	15·0	58·9
21	12·9	9·4	8·0	7·7	6·3	6·6	6·1	7·7	9·1	15·0	18·6	22·3	25·7	26·2	25·5	22·7	18·9	16·1	14·1	14·1	15·1	15·4	11·6	10·1	14·4	45·2
22 *d*	6·8	10·3	8·6	5·6	7·5	5·0	6·7	6·5	6·5	15·9	18·8	21·7	25·0	24·2	21·7	22·6	20·8	17·0	16·9	16·9	14·2	14·2	14·4	14·5	14·3	42·3
23 *d*	12·5	10·3	10·5	12·6	11·6	10·1	8·7	8·6	9·6	12·6	15·5	18·8	22·2	23·7	23·8	23·3	26·1	25·7	22·8	15·6	9·5	16·0	17·3	21·0	16·2	88·4
24 *d*	21·0	10·8	15·8	11·5	20·3	16·3	6·5	6·5	7·5	12·4	14·7	18·9	23·0	21·3	18·7	18·1	15·0	13·5	11·0	13·6	13·3	14·2	14·2	15·6	14·7	53·7
25	19·0	19·1	15·5	16·3	15·2	11·1	9·6	8·8	9·1	10·3	12·4	16·1	19·8	21·1	20·1	18·7	17·1	17·0	16·8	16·1	15·1	14·7	15·4	15·4	15·4	69·8
26 *q*	15·5	14·4	14·2	13·3	12·4	11·2	9·6	8·4	8·7	9·9	13·3	16·7	19·6	20·8	20·8	18·7	17·9	17·1	16·8	17·0	17·0	16·3	16·1	15·8	15·1	61·5
27 *q*	15·2	15·4	15·2	14·2	13·1	11·7	10·5	8·7	9·6	12·2	15·6	18·9	20·3	20·8	20·0	18·9	18·0	17·3	17·5	17·0	16·1	15·8	15·6	15·2	15·5	72·8
28 *q*	14·9	14·2	14·2	13·5	11·9	11·9	11·0	9·6	9·8	11·3	13·6	17·0	20·3	21·2	21·0	20·8	19·1	17·6	16·8	16·8	16·4	15·2	14·9	14·4	15·3	67·4
29	14·9	14·7	13·5	11·9	11·5	10·5	8·9	7·6	8·0	11·0	14·4	18·9	20·5	21·4	20·8	19·8	20·3	18·9	18·0	18·0	17·5	17·5	16·4	16·4	15·5	71·3
30	15·4	13·3	13·1	11·3	11·5	10·5	9·1	8·9	10·5	11·5	13·8	16·8	19·8	20·0	18·9	18·2	17·5	17·0	16·4	16·1	16·1	16·1	15·6	15·6	14·7	53·0
Mean	13·7	12·6	12·4	12·5	11·7	11·0	10·2	*9·5*	9·7	12·1	14·9	18·5	21·9	*23·1*	22·2	20·4	18·7	17·3	16·8	15·6	15·0	15·1	14·7	14·4	15·2	
Sum 200·0′+	211·6	177·2	173·2	174·1	152·1	128·9	107·3	84·1	91·0	163·6	248·1	356·6	456·9	492·1	464·8	411·3	359·8	319·9	303·8	268·8	250·8	252·8	240·2	232·7		Grand Total 10921·7

GEOMAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	446	450	453	454	454	454	457	457	453	454	451	453	461	462	457	458	455	456	459	462	540	527	458	455	462	1086
2	459	462	461	458	458	458	458	458	455	452	451	458	473	461	454	459	465	493	486	485	484	468	465	459	464	1140
3	456	445	443	437	450	454	455	459	460	458	454	449	445	445	447	450	453	454	454	454	453	455	456	454	452	840
4	456	455	454	449	447	449	445	443	443	449	451	450	446	452	471	485	488	486	474	470	465	455	452	452	458	987
5	441	445	447	450	444	438	438	443	447	455	462	468	463	459	459	474	489	477	464	458	462	457	448	443	455	931
6	438	437	442	435	433	432	440	437	441	449	454	459	461	470	474	482	485	475	464	458	458	459	454	446	453	883
7	436	433	430	423	439	443	449	451	453	454	454	450	447	450	452	454	457	462	461	461	456	456	455	455	449	781
8	456	454	439	434	434	442	448	452	453	456	454	453	450	447	451	454	455	456	457	459	459	455	450	444	451	812
9	430	435	443	449	454	455	455	455	453	454	452	444	440	439	444	450	452	453	453	450	452	453	442	447	448	754
10	449	453	453	447	447	449	452	452	450	448	444	440	440	441	447	453	459	463	468	476	467	461	456	455	453	870
11	456	457	458	458	458	457	459	457	455	450	447	443	442	450	458	458	460	466	470	470	468	465	456	450	457	968
12	441	440	439	443	442	449	452	453	452	448	445	444	442	443	447	452	457	458	457	455	454	453	451	450	449	767
13 *q*	450	449	450	455	456	457	458	457	456	455	451	445	442	444	446	449	452	454	452	453	453	452	450	442	451	828
14 *q*	443	443	446	450	453	455	458	458	458	457	452	446	442	444	445	447	452	455	454	453	451	449	449	449	450	809
15	449	449	451	452	453	454	455	455	454	451	448	445	446	446	447	448	450	450	454	458	462	456	452	442	451	827
16	446	448	450	448	440	441	438	437	441	443	442	438	440	448	450	454	467	478	498	498	467	456	453	446	453	867
17	431	407	394	383	394	417	436	443	446	445	443	438	429	434	449	457	457	456	455	457	458	456	456	442	437	483
18	431	434	438	436	438	443	450	450	450	447	442	438	445	450	461	468	463	461	463	465	458	460	454	438	449	783
19 *d*	379	370	336	323	350	404	433	440	443	440	438	440	450	458	477	489	482	468	459	467	465	449	443	452	*431*	355
20	455	452	453	436	439	447	448	447	449	449	445	441	441	450	456	460	468	474	477	481	471	466	463	456	455	924
21	432	396	403	411	413	406	413	419	425	430	430	430	436	439	446	467	484	491	486	473	465	455	451	447	439	548
22 *d*	422	396	380	390	392	401	423	430	435	446	442	440	439	443	447	450	472	477	469	477	474	469	469	473	440	556
23 *d*	471	462	443	456	456	455	454	453	453	451	447	443	443	443	449	468	514	617	615	549	504	480	461	388	*474*	1375
24 *d*	372	362	298	378	416	395	431	440	449	457	468	471	476	497	509	506	504	482	461	455	455	429	419	418	439	548
25	412	388	418	418	417	440	459	466	466	469	465	458	452	450	451	454	458	459	459	459	459	453	447	447	447	724
26 *q*	450	455	458	458	460	460	461	461	459	454	449	443	438	439	447	455	459	462	461	458	454	454	452	452	454	899
27 *q*	454	454	457	458	461	461	461	459	455	450	448	445	443	442	446	450	455	461	463	459	457	453	452	451	454	895
28 *q*	452	454	455	458	459	458	457	457	452	451	447	443	439	440	442	444	450	459	462	460	459	457	455	452	453	862
29	452	451	450	453	458	460	461	461	460	452	450	449	450	445	450	453	456	471	466	461	460	456	455	454	456	934
30	453	454	452	452	455	456	458	457	456	458	457	450	447	449	449	449	450	452	456	458	458	455	454	452	454	887
Mean	441	436	*433*	435	439	443	449	450	451	451	449	447	447	449	454	460	466	*471*	469	467	465	459	453	447	451	
Sum 12,000γ+	1218	1090	994	1052	1170	1290	1462	1507	1522	1532	1483	1414	1408	1480	1628	1797	1968	2126	2077	1999	1948	1769	1578	1411		Grand Total 324,923

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — APRIL 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1 *d*	1021 2334	16	1011 2333	14	0020 2134	12	0000 1144	10	1	14
2	0012 3322	13	0002 3321	11	0011 0122	7	0002 1220	7	1	14
3	2000 0000	2	2000 0000	2	2000 0000	2	3200 0000	5	1	14
4	0221 4211	13	0211 4211	12	0220 3111	10	0100 2111	6	1	14
5	2122 2212	14	1112 2212	12	2122 1201	11	1111 0211	8	1	14
6	2222 2311	15	1222 2311	14	2111 1101	8	0110 1211	7	1	14
7	2110 1230	10	2110 1220	9	2110 0030	7	1200 0000	3	1	14
8	1011 1121	8	0001 1120	5	1010 0011	4	1100 0000	2	1	14
9	3001 1002	7	2001 1002	6	3000 0002	5	2000 0001	3	1	15
10	1100 2121	8	1100 2121	8	1100 0020	4	0100 0010	2	1	14
11	0001 0012	4	0001 0010	2	0000 0002	2	0000 0000	0	0	15
12	2200 0000	4	2200 0000	4	2200 0000	4	1100 0000	2	1	15
13 *q*	0000 0001	1	0000 0001	1	0000 0001	1	0000 0001	1	0	15
14 *q*	0000 0100	1	0000 0100	1	0000 0000	0	0000 0000	0	0	15
15	0000 0011	2	0000 0011	2	0000 0001	1	0000 0001	1	0	15
16	0112 2332	14	0112 2331	13	0110 1132	9	0101 1231	9	1	15
17	3411 2102	14	3401 2101	12	3311 1002	11	3310 1001	9	1	15
18	2110 2213	12	1000 2212	8	2110 0103	8	1000 1103	6	1	15
19 *d*	4423 3332	24	4423 3321	22	2421 1132	16	4411 2221	17	1	14
20	1110 2131	10	1110 2121	9	1110 0031	7	0200 0010	3	1	14
21	1111 2212	11	1111 2211	10	1010 0212	7	3020 0221	10	1	14
22 *d*	2332 2222	18	2332 2221	17	2222 1222	15	3320 1211	13	1	14
23 *d*	2011 3453	19	2001 3452	17	2010 1343	14	2000 1554	17	2	14
24 *d*	5433 3342	27	5323 3342	25	4432 2332	23	4521 3323	23	2	14
25	3211 1101	10	3201 1101	9	3210 0001	7	3310 0000	7	1	14
26 *q*	0000 1000	1	0000 1000	1	0000 0000	0	0000 0000	0	0	15
27 *q*	0000 1101	3	0000 1101	3	0000 0000	0	0000 0000	0	0	15
28 *q*	0000 0100	1	0000 0100	1	0000 0000	0	0000 0000	0	0	15
29	1011 2320	10	0000 2320	7	1011 0100	4	0000 0110	2	1	15
30	1011 1110	6	0001 1110	4	1010 0000	2	0000 0000	0	0	15
								Mean	0·80	14

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 9000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	706	706	704	706	705	699	698	689	678	665	660	668	671	685	696	696	705	708	712	742	735	731	741	706	701	7812
2	694	711	712	714	715	715	709	699	685	669	657	640	655	672	679	722	708	755	764	743	694	689	631	669	696	7701
3 *d*	599	392	547	418	495	444	508	547	563	568	506	683	975	837	931	995	923	910	768	755	644	616	610	584	663	6918
4	633	649	623	632	662	665	661	651	634	625	634	632	653	665	709	722	715	720	711	715	694	689	676	676	669	7046
5	667	678	675	673	679	681	677	667	657	626	633	636	655	656	678	685	696	718	715	709	699	696	693	701	677	7250
6	687	686	683	678	688	680	684	685	674	660	652	656	663	674	672	682	706	712	711	712	707	699	691	683	684	7425
7	690	689	678	675	637	681	686	676	668	653	661	654	650	659	671	682	695	708	713	711	707	705	699	699	681	7347
8 *q*	696	692	692	692	693	695	693	685	676	665	657	653	656	669	672	698	716	735	728	715	708	695	696	695	691	7572
9 *q*	692	692	690	691	693	693	688	685	685	682	668	662	671	665	678	686	705	712	709	708	705	703	702	705	690	7570
10	702	699	696	697	693	695	697	692	678	669	655	659	642	662	696	713	709	706	714	715	709	707	704	705	692	7614
11	710	696	689	682	687	689	695	688	675	665	660	660	660	672	683	699	705	722	715	715	715	716	711	701	692	7610
12	699	699	684	686	695	692	692	685	672	657	653	667	668	668	686	692	715	727	732	732	720	713	708	701	693	7643
13	700	701	682	674	692	682	675	678	675	661	651	650	659	666	692	697	711	729	723	722	715	706	701	697	689	7539
14	694	693	698	696	691	691	691	682	671	662	659	661	669	682	701	725	711	728	746	745	723	704	694	668	695	7685
15	679	675	689	697	694	689	683	676	666	655	649	649	658	674	680	698	711	722	735	725	711	708	706	706	689	7535
16 *q*	699	694	694	694	695	690	690	691	686	675	669	675	666	675	683	692	702	715	732	733	727	718	709	700	696	7704
17	692	674	682	695	699	684	695	695	683	665	663	660	657	663	688	688	698	717	734	731	729	709	695	695	691	7591
18	694	693	691	693	693	685	686	683	669	659	653	659	665	672	680	698	705	714	723	719	715	712	712	710	691	7583
19	705	702	695	686	685	678	683	693	688	676	666	665	665	676	687	706	712	716	721	716	716	711	706	705	694	7659
20 *q*	701	689	692	698	696	695	692	682	673	667	660	665	659	680	705	712	712	718	725	722	715	715	709	704	695	7686
21	702	698	700	702	702	699	695	686	676	671	668	668	672	679	685	702	727	735	745	749	725	715	714	716	701	7831
22 *q*	697	693	703	705	707	703	696	684	675	665	655	648	650	663	672	685	698	712	716	715	715	713	712	712	691	7594
23	709	711	711	712	711	702	693	682	672	663	662	673	685	695	709	722	731	745	755	738	743	729	718	713	*708*	7984
24	713	714	713	712	708	698	685	672	662	656	660	672	687	690	689	702	716	744	782	766	744	737	728	722	707	7972
25 *d*	721	716	718	715	715	712	706	698	684	669	662	660	702	871	1039	871	819	975	982	806	677	94	−722	−61	643	6429
26 *d*	−372	−294	−36	−165	−256	−139	42	301	438	547	659	679	731	716	722	672	658	659	662	662	671	676	669	622	*397*	524
27	658	648	614	600	648	655	638	626	638	633	632	634	673	695	665	669	695	716	750	729	717	662	641	625	661	6861
28 *d*	662	663	670	671	670	676	669	626	585	591	567	600	642	679	672	730	700	712	790	780	685	614	534	464	652	6652
29 *d*	374	262	506	431	400	456	508	560	596	658	642	636	688	683	649	679	679	677	694	702	699	689	678	674	592	5220
30	675	673	682	676	680	669	665	659	653	643	643	639	649	658	745	881	781	795	819	735	709	672	547	619	690	7567
31	366	211	211	586	612	495	634	676	672	653	648	649	648	657	668	681	699	712	712	709	699	689	688	680	611	5655
Mean	634	*619*	638	639	641	640	652	658	655	651	651	655	676	686	706	719	718	735	*740*	728	709	679	639	655	672	
Sum 19,000γ+	644	205	788	822	884	848	1214	1399	1307	1173	1164	1312	1944	2258	2882	3282	3263	3774	3938	3576	2973	2032	801	1296		Grand Total 499,779

GEOMAGNETIC DECLINATION (WEST)

Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 000·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	15·2	15·8	18·0	14·1	11·5	10·2	10·2	8·7	8·4	10·5	13·2	16·9	19·6	20·0	19·9	18·9	18·5	17·6	16·8	19·7	17·6	14·4	16·7	11·2	15·1	363·6
2	8·3	10·2	9·8	9·4	10·0	10·2	8·8	6·5	8·8	10·9	15·4	20·8	21·1	20·9	20·1	20·8	17·5	17·1	14·3	14·1	10·9	8·0	7·3	12·5	13·1	313·7
3 *d*	5·3	12·8	15·7	15·1	32·8	15·8	9·5	4·7	12·1	15·0	13·2	15·1	9·1	21·1	20·7	24·8	23·9	26·1	22·5	14·1	8·6	7·6	6·9	7·1	15·0	359·6
4	5·8	7·9	5·2	12·7	9·9	8·2	8·6	9·0	11·4	13·6	16·0	19·7	22·3	21·7	19·8	21·2	20·7	19·7	18·9	18·9	16·9	14·6	13·7	16·9	14·7	353·3
5	15·6	14·4	8·8	8·5	8·4	8·8	8·7	8·7	10·0	14·8	17·9	20·9	23·2	21·9	20·7	19·6	18·5	14·8	15·0	15·8	16·2	15·9	14·8	7·8	14·6	349·7
6	12·2	13·2	12·8	14·0	10·4	9·8	9·8	8·4	8·8	11·2	14·6	19·0	22·5	22·4	20·9	19·0	17·4	15·9	15·2	13·9	15·0	14·5	11·0	10·7	14·3	342·6
7	10·7	11·3	11·0	2·0	9·3	5·5	3·0	0·9	5·7	14·1	14·1	16·4	19·1	18·7	17·8	17·0	16·1	15·7	14·9	14·8	14·8	14·9	14·2	13·9	12·3	295·9
8 *q*	13·9	13·3	12·4	12·1	9·5	7·6	5·7	4·0	5·7	8·9	11·4	15·0	17·8	19·1	19·6	16·9	16·8	15·9	14·4	14·1	10·3	15·1	16·1	15·9	13·0	311·5
9 *q*	15·9	14·9	13·5	12·4	12·1	12·2	12·4	12·2	12·5	12·9	15·1	16·5	19·1	20·0	19·8	18·9	17·3	16·0	15·2	15·1	14·5	14·8	14·2	15·0	15·1	362·5
10	14·5	14·1	13·0	11·4	8·7	5·9	5·5	4·9	7·5	10·2	13·6	17·5	20·2	20·2	20·8	18·0	14·6	15·0	14·9	15·4	14·4	13·8	13·8	15·4	13·5	323·3
11	19·6	12·3	12·1	10·2	11·7	8·9	8·4	6·4	8·4	10·4	13·0	17·1	20·0	21·6	21·6	20·7	19·0	17·8	16·5	16·4	16·9	16·5	6·8	9·9	14·3	342·2
12	12·9	14·1	18·1	18·5	9·3	6·6	6·3	7·1	8·6	11·9	15·6	17·9	21·0	22·2	22·5	20·9	19·6	18·0	15·4	11·7	15·1	8·8	8·1	10·6	14·2	340·8
13	11·8	11·7	13·8	17·0	4·3	1·6	7·2	8·2	10·0	11·8	15·1	18·3	21·0	20·2	20·8	19·5	17·0	15·9	14·1	15·9	15·0	13·7	10·8	13·7	13·7	328·4
14	14·1	16·8	13·2	12·3	10·0	8·8	8·8	8·5	9·4	13·2	17·8	22·3	25·1	25·5	25·2	23·7	21·1	19·0	18·1	14·7	12·3	11·8	9·3	5·7	15·3	366·7
15	3·1	3·8	6·7	12·1	11·5	10·5	9·5	9·4	10·3	12·8	16·2	19·3	21·8	22·9	21·5	21·4	21·1	19·5	18·7	17·0	15·8	15·5	13·9	6·7	14·2	341·0
16 *q*	6·1	13·2	12·9	11·8	9·2	8·5	8·9	7·6	9·5	12·3	15·1	18·0	19·8	20·8	21·0	20·5	18·9	17·8	17·8	16·9	16·8	11·5	10·5	11·5	14·0	336·9
17	15·1	3·9	5·7	5·6	5·9	9·2	10·1	8·7	8·9	12·1	15·3	18·0	21·8	22·1	21·9	20·3	19·2	18·6	18·1	17·7	16·8	13·2	11·4	11·1	13·8	330·7
18	12·3	11·6	10·8	14·1	9·1	9·4	12·3	10·3	10·7	13·4	16·2	18·9	19·8	20·8	20·6	19·8	19·2	18·4	17·2	16·1	16·2	16·1	15·8	14·9	15·2	364·0
19	15·0	16·5	12·5	8·4	8·7	11·6	11·5	10·1	10·6	12·0	14·2	18·7	20·8	21·3	20·6	21·4	18·9	17·0	15·9	15·7	16·0	15·3	15·7	15·7	15·2	364·1
20 *q*	18·1	20·7	15·9	10·6	7·9	6·6	4·8	4·9	7·7	10·3	14·4	19·4	22·2	22·2	20·8	18·7	16·1	15·1	15·3	15·1	13·9	11·5	14·9	15·3	14·3	342·4
21	15·9	15·9	13·9	11·2	9·3	7·9	6·0	6·4	7·8	11·3	14·2	18·3	22·1	23·4	22·3	21·1	19·8	17·6	16·1	14·4	13·6	14·8	14·6	14·0	14·7	351·9
22 *q*	16·8	14·1	11·4	12·6	11·3	8·9	6·8	5·7	7·6	10·4	15·5	19·2	21·8	23·5	22·4	19·2	16·0	14·2	14·0	14·1	15·0	15·1	15·3	15·9	14·5	346·8
23	15·0	14·1	13·2	12·5	10·3	7·6	6·6	6·1	8·8	14·6	18·0	21·5	23·7	24·4	23·7	22·0	20·6	20·8	18·7	17·1	18·9	15·1	12·8	13·0	*15·8*	379·1
24	12·2	12·0	11·5	11·5	9·2	6·9	7·2	7·8	10·0	14·1	18·0	22·3	24·4	23·5	20·5	18·6	17·8	16·8	20·9	20·6	18·3	19·1	17·8	17·0	15·7	378·0
25 *d*	13·9	12·1	12·1	10·7	9·3	8·6	8·5	10·5	11·7	12·4	16·1	22·2	24·0	16·9	20·6	31·9	30·6	33·6	38·2	31·8	33·7	13·4	−74·0	−10·7	14·1	338·1
26 *d*	−79·7	−91·2	−40·6	−31·4	−22·2	−13·0	−24·5	−13·0	9·5	5·8	7·5	7·9	11·6	4·1	9·5	15·7	15·9	15·6	15·9	16·7	16·7	16·3	14·3	14·0	*−4·9*	−118·6
27	8·4	10·2	10·5	11·5	3·3	2·0	−0·1	−1·3	2·3	6·6	9·8	13·1	15·9	16·8	18·7	17·9	18·6	17·7	14·1	18·5	15·2	14·0	12·5	7·4	11·0	263·6
28 *d*	9·8	10·6	11·1	9·8	10·9	8·8	5·9	13·0	14·9	9·1	12·8	19·9	21·1	23·7	22·7	23·8	17·8	18·9	20·9	20·7	14·4	13·4	1·1	−13·8	13·4	321·3
29 *d*	−9·6	−13·5	6·1	28·3	6·2	26·0	12·5	6·6	6·3	8·7	8·5	12·5	8·8	10·6	13·3	17·7	17·0	15·4	16·3	16·6	15·8	14·4	14·2	14·3	11·4	273·0
30	14·4	13·4	11·2	7·5	7·8	7·5	6·6	5·5	7·6	9·6	12·9	16·8	18·7	19·3	21·4	17·4	21·4	23·3	32·7	18·8	10·6	18·5	5·7	2·0	13·8	330·6
31	−14·2	−38·3	−25·2	−6·1	9·5	8·4	13·4	6·5	0·0	8·2	12·4	15·1	16·7	17·0	17·0	16·4	16·3	17·0	15·8	15·7	15·0	14·8	13·2	12·7	7·6	183·3
Mean	8·0	6·8	8·9	10·0	8·9	8·2	7·1	*6·5*	8·9	11·4	14·3	17·9	19·9	*20·3*	20·3	20·1	18·8	18·1	17·8	16·7	15·5	14·1	9·5	10·6	13·3	
Sum 200·0′+	48·4	11·9	77·1	110·4	75·1	55·5	18·9	3·0	77·5	153·1	243·1	354·5	416·1	428·8	428·7	423·7	383·2	361·8	352·8	318·1	281·2	236·4	93·4	127·3		Grand Total 9880·0

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 9000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	451	450	443	434	437	447	450	453	454	451	446	441	439	437	438	441	446	450	453	442	453	464	459	363	443	1642
2	399	431	443	450	452	447	443	443	442	441	440	442	448	451	461	474	500	507	528	522	468	429	332	309	446	1702
3 *d*	227	193	166	92	116	274	335	399	445	456	496	546	554	573	585	577	506	516	491	497	420	416	393	344	*401*	617
4	370	394	397	371	413	445	453	466	468	474	473	466	466	478	497	506	508	504	497	492	485	466	441	438	457	1968
5	407	392	396	407	416	423	438	446	454	459	454	447	450	450	456	467	472	490	491	480	471	465	458	439	447	1728
6	441	454	458	458	454	460	457	457	457	459	461	461	462	471	474	470	465	470	472	475	472	466	464	463	463	2101
7	453	431	393	378	348	352	379	408	432	442	453	463	470	469	470	471	466	462	462	462	462	463	466	463	438	1518
8 *q*	464	466	466	466	466	465	463	461	458	457	457	457	463	471	475	481	486	489	493	486	482	471	466	465	470	2274
9 *q*	462	461	463	466	465	465	461	454	446	444	450	451	451	458	462	465	464	466	465	463	461	459	458	458	459	2018
10	458	462	463	465	466	464	461	458	454	450	449	446	451	449	453	468	489	478	466	464	464	461	457	452	460	2048
11	428	409	420	424	429	438	448	453	453	451	449	449	450	453	455	458	463	463	468	464	456	454	455	444	447	1734
12	451	453	444	394	410	442	452	457	454	448	441	434	436	442	450	458	460	468	479	486	481	467	442	432	449	1781
13	440	444	445	382	390	425	440	442	441	438	436	436	439	450	454	463	470	474	472	467	466	460	451	438	444	1663
14	440	417	438	448	454	458	458	459	456	450	445	438	432	436	447	463	481	486	489	484	472	462	449	431	454	1893
15	408	392	397	427	450	460	463	465	462	458	452	450	450	456	462	468	476	484	488	489	483	473	457	440	455	1910
16 *q*	428	436	441	443	447	452	452	453	450	447	445	438	442	446	450	450	450	449	452	458	465	465	458	451	449	1768
17	427	364	375	384	408	423	427	441	447	450	450	450	451	450	449	454	457	456	465	474	474	472	459	449	440	1556
18	439	445	447	435	434	445	442	449	454	449	444	439	436	443	450	451	457	457	455	458	457	456	455	457	448	1754
19	454	442	411	418	426	417	414	427	435	438	441	442	453	464	470	463	465	465	466	462	458	459	459	458	446	1707
20 *q*	450	423	423	439	450	450	448	450	451	447	443	442	442	447	454	466	470	466	461	463	469	467	460	460	452	1841
21	458	453	447	446	450	452	454	454	452	447	442	438	436	442	447	450	454	468	478	481	487	476	463	443	455	1918
22 *q*	430	419	435	450	457	461	462	462	461	458	450	443	441	442	447	454	455	458	458	456	454	454	454	454	451	1815
23	457	459	459	460	458	458	458	454	451	446	439	433	431	438	447	450	454	453	460	472	461	446	442	446	451	1832
24	449	452	455	458	460	458	456	454	444	435	424	426	428	438	454	461	459	454	447	467	474	465	459	454	451	1831
25 *d*	454	457	459	462	462	461	456	451	445	440	437	431	424	469	658	621	641	637	591	539	536	604	455	826	517	3416
26 *d*	590	671	792	185	252	414	658	556	509	497	517	559	557	623	607	548	535	529	521	510	502	497	505	467	*525*	3601
27	446	481	478	451	465	477	490	496	486	476	468	470	481	503	505	502	498	498	498	482	461	458	412	387	474	2369
28 *d*	431	464	474	479	478	478	490	496	483	481	491	472	461	468	503	511	576	538	525	493	440	417	343	280	470	2272
29 *d*	280	327	266	162	219	266	346	416	479	523	532	537	566	577	552	516	509	510	503	494	495	494	488	475	439	1532
30	469	472	477	478	481	479	480	481	484	486	485	482	479	477	479	539	547	508	489	461	438	442	372	337	472	2322
31	198	151	198	273	350	366	373	442	477	489	495	495	492	488	485	485	486	481	486	486	484	484	482	481	422	1127
Mean	425	425	428	*403*	415	433	449	455	457	458	458	459	461	470	481	482	*486*	485	483	478	469	465	446	442	455	
Sum 12,000γ+	1159	1165	1269	485	863	1422	1907	2103	2184	2187	2205	2224	2281	2559	2896	2951	3065	3034	2969	2829	2551	2432	1814	1704		Grand Total 338,258

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — MAY 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1	2102 1234	15	1102 1234	14	2100 0023	8	1100 0024	8	1	14
2	3113 3455	25	3013 3455	24	2113 1334	18	4101 1345	19	2	14
3 *d*	7756 6654	46	7756 6654	46	5644 4543	35	5654 4554	38	2	14
4	3312 3223	19	3302 3223	18	3210 1113	12	3411 2113	16	1	14
5	2112 1213	13	2102 1211	10	2110 021[illegible]	10	3220 0222	13	1	14
6	1200 1012	7	1100 1001	4	1200 0012	6	2100 1001	5	0	14
7	3431 0001	12	2321 0001	9	3431 0000	11	3332 0100	12	1	14
8 *q*	0010 2221	8	0000 2211	6	0010 0121	5	0000 0100	1	1	15
9 *q*	0111 1211	8	0001 1210	5	0110 0001	3	0000 0000	0	0	15
10	1111 3221	12	1111 3221	12	0110 0211	6	0000 1211	5	1	15
11	3211 1213	14	2211 1212	12	3210 0003	9	3110 0011	7	1	15
12	3312 1223	17	2212 1221	13	3310 0123	13	2300 0112	9	1	15
13	3421 2222	18	3211 2211	13	3420 1122	15	2301 1012	10	1	15
14	2110 2323	14	1100 2323	12	2110 1123	11	2001 1112	8	1	15
15	2000 1122	8	2000 1121	7	2000 1002	5	2300 0012	8	0	15
16 *q*	2001 2112	9	1001 2111	7	2000 0002	4	2100 1000	4	0	15
17	4221 3222	18	3221 3221	16	4220 1012	12	4320 1011	12	1	15
18	1210 1110	7	1210 1110	7	0210 0000	3	1110 0000	3	0	15
19	2211 1210	10	1111 1210	8	2210 0100	6	3221 1100	10	1	14
20 *q*	2101 1112	9	1101 1111	7	2000 0012	5	3100 0011	6	1	14
21	0000 0122	5	0000 0122	5	0000 0011	2	0000 0012	3	0	15
22 *q*	2010 0000	3	1000 0000	1	2010 0000	3	2000 0000	2	0	15
23	0000 0232	7	0000 0232	7	0000 0022	4	0000 0111	3	1	15
24	1111 2331	13	0011 2331	11	1110 1120	7	0000 1230	6	1	15
25 *d*	1114 8679	37	1014 8679	36	1113 4549	28	0002 6668	28	2	15
26 *d*	9975 5324	44	8975 5324	43	9963 4212	36	8964 5314	40	2	15
27	4422 3244	25	4422 3244	25	3210 1033	13	3210 1134	15	1	15
28 *d*	2234 5655	32	2234 5655	32	1233 3355	25	3112 3555	25	2	15
29 *d*	7652 4311	29	7652 4311	29	5632 3100	20	5652 3111	24	2	15
30	1111 5555	24	1111 5555	24	0110 3355	18	0000 2445	15	2	15
31	7542 2332	28	7542 2332	28	6532 1111	20	6551 1110	20	2	16
								Mean	1·03	15

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 14,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *q*	674	671	668	671	678	677	672	661	647	632	632	635	642	674	678	675	695	704	700	697	692	688	684	682	672	2129
2	678	675	678	679	679	680	677	675	665	655	645	653	656	687	694	701	691	712	718	735	710	700	692	678	684	2413
3	677	674	665	671	670	682	686	674	662	651	648	651	665	678	698	692	707	731	740	721	711	701	695	692	685	2442
4	688	692	693	694	695	692	684	674	663	654	651	658	687	691	721	761	783	790	776	746	717	702	698	664	703	2874
5 *d*	668	671	677	688	690	687	678	666	661	661	654	657	657	668	672	682	707	723	731	806	758	713	612	314	671	2101
6 *d*	39	-64	174	683	691	666	650	654	651	651	656	665	671	684	688	688	678	692	718	737	727	710	667	629	*600*	405
7	500	298	518	593	631	658	633	616	630	641	638	644	662	671	668	674	678	682	685	684	685	688	691	694	632	1162
8	692	692	691	691	691	688	682	681	669	651	627	631	662	716	698	718	724	727	727	717	746	705	678	681	691	2585
9	677	682	652	619	655	670	678	667	660	655	648	662	662	688	694	697	711	707	711	711	711	702	701	671	679	2291
10	670	664	681	696	691	691	684	671	659	661	658	655	665	681	697	711	710	704	715	714	713	707	704	698	687	2500
11	689	691	693	687	691	695	691	682	672	669	668	666	672	683	701	708	698	730	743	730	710	704	697	695	694	2665
12	693	690	687	691	695	691	688	679	675	667	657	656	662	664	682	714	725	714	714	721	716	711	712	706	692	2610
13	704	697	707	714	712	709	702	689	677	671	667	665	661	670	682	691	704	715	724	723	713	720	712	711	697	2740
14	708	708	691	691	703	704	701	693	685	683	670	664	665	655	694	712	714	731	734	737	724	708	691	687	698	2753
15	658	667	674	690	690	697	698	690	677	664	661	665	680	699	708	708	713	710	707	711	713	710	706	702	692	2598
16	697	697	701	700	701	700	693	684	671	658	649	667	676	687	688	719	712	729	723	722	719	712	709	705	697	2719
17	703	703	700	694	696	697	692	682	674	660	655	660	664	674	711	726	754	740	740	721	710	707	706	694	698	2763
18 *q*	674	677	690	689	693	692	688	684	677	673	670	674	682	690	700	703	711	711	715	715	713	713	708	703	694	2645
19	700	699	700	701	700	697	694	691	686	676	669	677	686	693	713	720	719	716	716	720	715	711	710	711	701	2820
20 *q*	708	705	706	707	703	697	686	676	674	670	659	661	677	687	705	714	712	712	711	710	710	710	710	710	697	2720
21	709	707	707	708	707	703	702	698	689	676	674	677	687	696	710	710	723	727	720	723	721	715	703	701	*704*	2893
22	700	700	702	702	698	700	691	687	684	670	659	660	660	666	696	694	701	716	723	722	719	713	710	710	695	2683
23 *q*	710	709	707	707	710	707	699	688	678	667	661	662	674	685	697	710	726	724	722	727	726	725	708	701	701	2830
24 *q*	697	702	706	707	704	699	687	687	687	679	669	663	661	667	677	694	708	723	729	730	720	716	720	720	698	2752
25 *d*	711	706	716	730	730	725	707	708	718	706	687	671	671	668	683	716	734	775	809	789	726	601	570	394	694	2651
26 *d*	174	459	575	684	684	686	691	683	676	668	660	658	665	683	697	743	743	720	720	733	743	724	689	677	660	1835
27 *d*	652	619	611	652	664	661	668	685	680	658	648	635	667	687	693	694	703	708	733	723	713	704	705	705	678	2268
28	703	696	702	706	706	705	696	687	677	664	658	651	656	679	693	709	729	726	724	735	716	702	697	696	696	2713
29	695	694	692	696	696	680	656	671	682	673	664	657	664	670	675	701	741	723	706	707	706	712	703	710	691	2574
30	692	684	693	699	694	690	681	660	680	680	667	667	678	697	693	713	725	727	743	739	722	713	719	716	699	2772
Mean	645	*642*	662	688	692	691	685	678	673	665	658	659	668	681	693	707	716	722	726	*727*	717	705	694	672	686	
Sum 19,000γ+	340	265	857	1640	1748	1726	1535	1343	1186	944	729	767	1037	1438	1806	2198	2479	2649	2777	2806	2525	2147	1807	1157		Grand Total 493,906

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *q*	11·8	10·8	9·8	9·9	8·4	7·6	6·7	5·8	5·8	7·6	11·3	14·7	17·3	19·2	17·5	16·7	17·1	17·2	15·9	13·9	14·1	13·8	13·4	12·9	12·5	199·2
2	13·3	13·4	11·9	9·6	8·8	6·3	6·3	6·0	5·1	7·6	12·2	15·0	17·5	20·4	20·7	19·9	16·9	15·6	14·4	11·1	12·6	12·9	13·1	12·7	12·6	203·3
3	15·4	18·0	16·4	14·0	9·4	9·1	5·9	7·0	9·4	11·6	11·7	14·2	18·2	20·5	21·3	19·7	18·7	17·3	13·8	15·2	15·2	15·0	14·1	13·2	14·3	244·3
4	12·9	13·8	9·7	9·5	9·0	7·6	5·9	4·6	3·5	5·7	9·8	15·2	18·8	20·9	20·9	20·7	22·8	23·6	20·8	18·7	16·8	15·0	10·0	6·1	13·4	222·3
5 *d*	8·5	9·8	11·3	11·5	9·8	8·4	6·9	6·8	8·7	11·9	16·1	19·1	23·1	24·7	25·9	23·7	21·9	19·0	17·4	11·5	9·6	18·3	17·8	4·8	14·4	246·5
6 *d*	-22·1	-17·5	-38·8	-3·4	4·6	4·0	4·0	5·4	7·0	9·8	13·4	17·8	21·7	20·5	19·1	17·2	15·0	14·5	16·9	18·0	18·2	16·2	7·3	7·2	*7·3*	76·0
7	-8·3	-7·1	-5·5	-4·5	-7·9	-0·4	1·4	5·0	7·8	9·9	12·8	17·2	20·9	22·5	21·0	19·7	17·1	15·3	14·4	14·1	14·2	14·2	14·1	13·5	9·2	121·4
8	13·2	13·1	12·1	10·6	9·5	7·6	4·1	5·8	6·5	9·5	12·2	21·5	21·6	23·6	23·3	22·9	20·6	19·7	17·0	16·8	13·2	9·3	7·6	9·4	13·8	230·7
9	10·6	10·3	12·7	17·0	14·3	10·4	7·8	7·8	9·5	11·3	14·0	14·2	16·9	18·9	19·3	18·7	18·7	17·5	17·3	16·2	15·1	14·1	13·0	13·5	14·1	239·1
10	9·7	13·5	11·6	7·6	7·8	9·3	7·6	6·8	5·9	8·7	10·7	14·9	18·6	20·8	20·8	21·6	19·9	18·0	16·2	15·9	16·0	14·2	14·2	14·1	13·5	224·4
11	12·3	12·1	11·7	11·1	9·6	7·7	7·7	8·6	8·6	9·8	12·0	15·3	20·5	23·7	25·3	24·1	20·9	19·7	17·0	12·4	15·1	15·5	15·1	13·6	14·6	249·4
12	13·3	13·6	13·6	11·6	8·8	7·8	8·0	7·2	8·5	9·3	10·5	15·4	19·9	21·5	20·8	20·2	18·9	16·9	16·1	16·3	16·2	15·3	15·0	14·0	14·1	238·7
13	14·2	13·0	8·6	10·5	9·6	7·9	7·2	8·4	9·5	11·4	14·8	18·8	21·6	22·0	21·7	20·8	19·8	19·1	17·9	15·5	15·4	14·2	13·8	13·6	14·6	249·3
14	13·0	15·9	15·5	12·7	7·9	6·8	6·1	6·8	9·0	10·4	13·1	15·9	19·9	23·6	22·9	22·0	20·5	20·0	17·7	17·3	16·3	16·4	14·9	10·7	14·8	255·3
15	11·2	4·5	4·8	5·0	6·9	6·1	5·2	6·2	8·7	12·4	14·6	17·1	19·0	19·0	18·6	17·0	17·1	17·1	17·8	17·0	16·8	15·8	15·4	13·7	12·8	207·0
16	13·8	13·0	12·4	11·3	10·5	9·5	9·1	8·7	9·6	12·3	14·2	15·0	17·3	18·6	18·5	19·1	17·8	17·6	16·9	17·8	17·3	16·4	16·8	15·1	14·5	248·6
17	13·4	14·2	13·0	10·8	9·4	8·7	8·0	9·5	10·7	11·3	16·4	19·7	21·0	20·1	20·8	20·6	17·4	16·2	18·8	18·2	16·9	17·0	17·3	14·0	15·1	263·4
18 *q*	8·2	11·4	12·5	10·3	9·9	10·1	9·3	9·1	9·4	9·8	11·2	15·3	18·7	19·8	20·0	19·1	18·6	17·2	16·8	16·2	15·9	15·2	14·2	14·2	13·9	232·4
19	13·8	12·6	11·7	11·9	10·7	8·9	7·1	6·0	6·9	9·9	13·6	16·9	19·9	21·0	22·4	22·0	20·3	18·8	18·7	17·8	17·3	16·9	16·0	15·3	14·9	256·4
20 *q*	14·9	14·0	12·2	11·4	8·9	7·1	6·6	8·0	9·5	11·5	14·0	15·8	17·2	18·9	19·8	19·9	18·8	17·0	15·4	15·2	15·2	15·6	15·3	15·0	14·1	237·2
21	14·2	13·7	13·2	12·4	11·5	10·5	8·8	6·8	7·6	9·8	14·0	18·8	22·3	23·3	23·0	20·9	20·1	18·0	16·8	16·2	17·1	16·8	16·3	14·2	*15·3*	266·3
22	13·4	13·1	12·4	11·5	9·6	6·8	6·3	8·0	10·7	11·4	15·9	20·8	23·5	23·6	23·6	22·4	19·9	17·3	16·0	15·8	15·9	15·4	15·2	14·5	15·1	263·0
23 *q*	14·2	13·6	14·0	12·3	10·3	8·9	7·7	7·8	8·4	10·8	15·6	20·4	20·6	20·9	20·8	19·8	18·9	17·3	17·2	17·7	17·3	16·0	15·8	13·9	15·0	260·2
24 *q*	13·2	13·0	11·6	10·3	9·8	8·8	9·7	9·6	8·7	8·4	10·4	14·2	18·0	19·6	20·0	19·8	18·9	18·2	16·9	15·8	15·2	15·1	14·9	12·9	13·9	233·0
25 *d*	12·4	13·1	12·3	10·3	9·5	8·9	11·6	12·2	10·3	10·9	12·8	17·0	20·5	22·7	23·6	24·2	23·6	22·6	24·4	18·0	13·2	12·5	7·2	-7·3	14·4	246·5
26 *d*	-7·3	-0·3	11·4	12·1	9·7	6·9	5·1	5·7	7·9	11·4	14·3	16·4	19·6	21·7	22·3	26·2	25·4	20·0	19·1	18·9	18·2	12·5	11·9	10·0	13·3	219·1
27 *d*	8·5	7·3	-5·9	-0·6	0·0	-1·7	-0·4	4·7	5·0	9·3	14·4	16·9	19·6	20·7	21·0	20·0	18·7	17·9	17·9	17·3	13·1	16·2	15·5	15·0	11·3	170·4
28	13·5	8·9	9·9	10·8	8·9	8·3	8·6	9·6	10·3	10·4	12·7	18·2	20·5	22·9	24·2	23·4	22·3	18·2	16·9	15·1	12·8	15·1	14·3	13·4	14·5	249·2
29	13·0	12·2	11·4	10·6	11·4	9·4	12·7	11·7	8·9	8·5	9·8	12·5	16·2	17·7	18·6	19·0	17·0	17·2	16·7	17·1	16·3	16·0	13·7	14·3	13·8	231·9
30	7·9	6·3	9·8	9·8	9·0	7·1	5·5	6·0	9·4	8·7	11·5	16·3	19·9	21·8	20·9	21·9	21·8	19·9	18·2	16·9	17·0	16·3	15·3	7·8	13·5	225·0
Mean	9·9	10·1	8·9	9·6	8·5	7·5	*6·9*	7·4	8·2	10·0	13·0	16·7	19·7	21·2	*21·3*	20·8	19·5	18·1	17·2	16·1	15·5	15·1	13·9	11·8	13·6	
Sum 200·0′+	96·1	103·3	67·3	87·9	55·6	24·4	6·5	21·6	46·8	101·3	190·0	300·5	390·3	435·1	438·6	423·2	385·4	343·9	317·3	283·9	263·5	253·2	218·5	155·3		Grand Total 9809·5

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *q*	481	482	482	478	476	479	480	480	481	481	475	470	469	470	479	482	481	481	479	479	478	478	477	477	478	1475
2	475	470	463	468	470	470	468	470	476	472	467	466	466	472	484	498	501	489	487	489	489	485	474	465	476	1434
3	459	443	446	449	463	464	473	478	482	477	474	472	469	472	474	479	480	483	493	488	484	480	477	476	472	1335
4	475	460	459	468	470	473	473	472	475	466	460	454	460	474	489	512	536	549	530	520	515	485	430	414	*480*	1519
5 *d*	419	446	458	463	474	477	478	478	472	466	465	465	476	477	483	488	494	503	500	458	419	401	417	449	464	1126
6 *d*	303	681	357	363	458	487	493	493	497	499	493	491	489	490	492	498	501	496	488	491	504	497	457	413	476	1431
7	110	263	277	297	326	396	435	447	451	469	474	469	470	477	481	482	482	482	481	478	476	473	472	473	*423*	141
8	477	479	481	483	483	481	477	475	475	472	470	462	466	481	513	521	531	519	512	506	460	431	438	435	480	1528
9	428	434	444	426	415	426	450	462	474	477	481	485	485	482	485	485	486	489	483	483	479	477	449	380	461	1065
10	407	425	426	449	462	470	476	482	485	478	473	469	465	465	466	473	481	485	482	483	481	481	476	470	467	1210
11	468	469	469	471	467	466	472	477	475	466	462	462	461	462	461	466	475	469	481	500	494	502	478	474	473	1347
12	474	472	469	463	468	474	474	469	465	460	460	460	464	470	477	481	492	497	492	484	481	478	472	469	474	1365
13	467	461	449	455	462	469	470	470	469	465	464	460	457	458	464	470	474	476	474	478	478	472	470	464	467	1196
14	458	447	430	415	434	453	463	467	467	466	466	466	474	472	474	483	492	493	494	490	485	481	430	421	463	1121
15	386	319	366	406	443	461	459	470	478	477	474	470	466	463	464	469	469	471	471	471	471	472	470	469	451	835
16	465	465	465	465	468	470	470	474	476	471	466	464	468	470	464	462	470	471	476	475	473	469	457	456	468	1230
17	459	459	459	462	463	461	459	457	454	453	452	456	455	459	460	479	491	511	501	490	482	472	466	442	467	1202
18 *q*	418	438	448	460	464	466	468	468	468	473	470	469	469	471	473	470	468	471	472	474	472	472	472	472	465	1166
19	472	471	470	469	468	467	467	466	466	462	458	457	454	458	458	473	494	505	499	485	479	477	474	474	472	1323
20 *q*	475	472	471	471	473	474	473	469	462	464	461	454	455	463	469	473	476	475	474	471	471	471	471	471	469	1259
21	473	473	474	474	474	474	473	469	467	466	463	455	455	463	465	467	472	479	482	478	474	474	472	467	470	1283
22	470	473	474	474	473	469	467	459	455	455	451	438	440	450	455	468	477	477	475	470	468	468	466	464	464	1136
23 *q*	466	468	470	470	470	470	470	466	464	459	452	444	445	451	455	460	465	471	473	470	468	465	466	466	463	1124
24 *q*	467	467	466	468	471	471	469	464	463	464	461	455	452	452	459	463	468	471	475	472	470	467	463	459	465	1157
25 *d*	455	459	461	459	462	463	464	455	450	447	448	448	447	447	449	451	458	468	498	537	490	431	454	409	459	1010
26 *d*	582	490	339	426	471	481	483	483	489	490	488	482	479	470	473	471	490	502	488	477	482	480	442	434	475	1392
27 *d*	404	317	344	510	503	335	396	435	461	472	484	472	458	460	463	471	471	473	479	495	495	482	473	466	451	819
28	441	436	458	470	474	475	476	478	482	476	476	476	483	482	480	480	483	496	494	487	486	482	477	472	476	1420
29	472	471	472	472	471	468	464	461	470	473	474	475	479	480	481	487	496	514	504	484	477	473	475	466	477	1459
30	438	412	432	448	463	471	475	476	459	460	464	463	459	459	464	473	483	489	493	487	479	477	466	436	464	1126
Mean	441	451	*439*	452	461	462	467	469	470	469	467	464	465	467	472	478	485	*489*	488	485	479	472	463	453	467	
Sum 13,000γ+	244	522	179	552	839	861	1015	1070	1108	1076	1026	929	935	1020	1154	1335	1537	1655	1630	1550	1360	1153	881	603		Grand Total 336,234

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — JUNE 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1 *q*	1001 2110	6	1001 2110	6	0000 1000	1	0000 1000	1	0	16
2	0112 3331	14	0012 3331	13	0111 1121	8	0001 1211	6	1	16
3	1211 2330	13	1110 2330	11	1211 1210	9	1200 1110	6	1	16
4	1012 3343	17	1002 3343	16	1011 0223	10	1001 1324	12	1	15
5 *d*	2112 3258	24	2112 3258	24	2010 1155	15	3101 1046	16	2	16
6 *d*	8522 3235	30	8522 3235	30	8410 1123	20	8510 1125	23	2	16
7	7431 1000	16	7431 1000	16	6320 0000	11	5522 1000	15	2	16
8	0123 3234	18	0123 3233	17	0113 2234	16	0013 3242	15	1	15
9	3312 2113	16	3312 2113	16	3211 1013	12	2231 1004	13	1	15
10	3111 1211	11	2111 1210	9	3110 0001	6	3210 0000	6	0	15
11	1100 2330	10	1100 2330	10	0000 0120	3	0010 0121	5	1	15
12	1101 2211	9	0101 2211	8	1101 0001	4	0100 0100	2	0	16
13	2111 1221	11	2101 1221	10	2110 0001	5	2100 0000	3	0	16
14	3321 3222	18	2221 3222	16	3310 1112	12	2301 2113	13	1	16
15	3210 1111	10	3110 1111	9	3210 0001	7	4310 0000	8	1	17
16	0012 2211	9	0002 2210	7	0011 0001	3	0000 1101	3	1	17
17	1012 2312	12	1012 2311	11	1012 0212	9	0000 0323	8	1	17
18 *q*	3000 0100	4	2000 0100	3	3000 0000	3	3100 0000	4	1	17
19	0000 2310	6	0000 2310	6	0000 0100	1	0000 1220	5	0	17
20 *q*	0010 1100	3	0010 1100	3	0010 0000	1	0000 0000	0	0	16
21	0121 0111	7	0021 0110	5	0120 0101	5	0010 0001	2	0	15
22	0112 2100	7	0012 2100	6	0111 0000	3	0011 1000	3	0	15
23 *q*	0100 0122	6	0000 0122	5	0100 0010	2	0000 0000	0	0	15
24 *q*	0010 0000	1	0010 0000	1	0000 0000	0	0000 0000	0	0	15
25 *d*	1221 2457	24	1121 2457	23	1211 0235	15	1010 0145	12	2	15
26 *d*	8221 1333	23	8221 1333	23	6211 0222	16	6410 1323	20	2	15
27 *d*	4333 1222	20	4333 1222	20	4312 0021	13	5542 0021	19	2	15
28	2102 2230	12	1002 2230	10	2102 1130	10	3001 1110	7	1	15
29	0231 2311	13	0231 2311	13	0220 0211	8	0010 1221	7	1	16
30	3122 3223	18	2122 3222	16	3111 1113	12	3222 1112	14	1	16
								Mean	0·87	16

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — JULY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 16,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	686	676	683	695	682	668	672	649	646	643	657	658	659	680	710	732	739	776	768	739	726	706	689	683	693	622
2	678	666	675	672	682	692	686	678	669	663	658	657	665	673	685	693	702	711	717	716	709	704	699	702	685	452
3 *q*	703	705	703	702	702	699	694	686	677	662	653	656	667	679	692	703	715	718	725	730	719	712	705	703	696	710
4	697	702	699	699	696	693	696	696	688	673	665	660	669	683	700	717	731	727	716	713	712	710	710	713	699	765
5 *d*	700	692	693	677	693	695	696	681	640	633	656	679	708	726	762	742	712	714	709	708	715	709	706	694	697	740
6	692	688	689	688	685	676	676	676	673	668	668	676	698	724	722	722	745	744	732	717	717	706	669	682	697	733
7	678	683	659	658	628	682	692	682	670	662	659	656	674	699	708	719	719	721	724	721	714	708	708	701	689	525
8	695	695	695	695	698	695	693	693	690	690	676	663	682	703	719	719	714	709	705	705	705	707	708	704	698	758
9 *q*	702	702	703	705	708	704	700	696	688	680	676	678	679	691	693	701	714	720	731	725	725	714	710	707	702	852
10 *q*	704	705	706	709	712	710	705	696	689	679	671	670	672	690	699	714	719	727	724	727	729	734	729	729	706	949
11 *d*	721	674	710	731	727	710	689	692	698	694	688	677	691	700	691	701	725	727	728	749	734	715	703	700	707	975
12	698	698	693	681	695	698	690	679	671	670	667	664	671	678	688	701	717	724	730	730	727	713	704	701	695	688
13	698	696	695	704	705	701	695	689	675	669	664	665	668	685	695	707	714	722	728	740	728	712	710	709	699	774
14	699	697	697	698	684	682	691	678	661	661	665	664	679	691	713	721	721	729	735	727	723	716	704	700	697	736
15	699	701	702	704	702	698	689	686	679	671	668	671	688	701	707	728	719	735	754	764	737	724	714	708	706	949
16	701	700	692	689	693	694	692	688	681	672	670	676	682	696	711	720	720	719	721	721	721	711	707	705	699	782
17	700	701	704	705	706	699	688	678	675	675	675	688	697	698	700	703	711	724	728	737	738	725	724	720	704	899
18	718	718	712	715	711	698	702	703	691	676	675	688	681	685	701	722	717	720	728	724	712	707	704	707	705	915
19	697	688	701	703	704	699	691	677	675	669	669	674	685	687	698	704	715	725	731	733	724	718	708	702	699	777
20	701	703	704	708	708	707	705	698	687	672	675	682	690	699	713	731	725	727	721	717	721	718	713	707	705	932
21	706	709	711	707	704	700	689	674	677	670	663	667	678	687	694	711	714	714	727	730	724	714	712	707	700	789
22 *q*	709	707	708	710	707	704	698	694	689	677	666	665	671	689	697	704	713	726	721	721	721	720	720	717	702	854
23 *d*	712	714	714	715	713	711	707	700	690	683	680	677	668	693	704	726	734	727	749	764	757	697	624	643	704	902
24	681	685	690	699	702	697	687	681	673	664	658	652	657	661	664	684	706	724	753	763	727	713	704	704	693	629
25	698	694	697	700	700	697	692	690	684	669	648	644	661	683	691	714	726	763	792	756	745	721	705	696	703	866
26	697	697	688	691	697	699	695	688	679	665	654	647	656	673	688	718	707	708	710	712	711	708	707	706	692	601
27	706	703	704	707	709	707	698	687	681	673	671	674	674	676	687	696	703	713	717	722	730	717	713	713	699	781
28	720	704	703	706	704	706	700	697	688	672	666	670	677	684	700	731	735	757	737	736	730	720	717	717	*707*	977
29	716	711	713	702	680	687	707	693	677	663	653	651	662	674	687	698	705	730	753	746	732	716	700	665	697	721
30 *d*	673	652	629	698	663	583	618	678	678	661	651	655	664	678	684	694	699	710	715	713	702	695	693	693	*674*	179
31 *q*	693	690	691	689	690	686	678	674	667	658	657	659	664	674	685	690	691	696	706	705	704	701	700	698	685	446
Mean	699	695	696	699	697	693	691	686	678	669	*665*	667	675	688	700	712	717	725	*730*	729	723	713	704	701	698	
Sum 20,000γ+	1678	1556	1563	1662	1590	1477	1411	1257	1006	737	622	663	937	1340	1688	2066	2227	2487	2635	2611	2419	2091	1819	1736		Grand Total 519,278

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — JULY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 300·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *d*	8·4	8·7	8·4	5·0	5·1	7·1	10·3	11·5	13·5	16·8	16·9	18·0	18·6	20·8	19·8	19·0	19·1	16·0	18·6	18·0	17·1	15·3	13·3	15·2	14·2	40·5
2	10·7	10·3	13·1	11·7	8·5	5·9	6·2	8·4	8·7	10·8	13·4	16·1	18·2	18·2	16·5	16·0	16·0	15·8	16·4	16·9	16·3	15·9	15·2	15·3	13·4	20·5
3 *q*	13·0	11·6	12·7	12·1	10·6	8·4	6·8	6·6	7·9	10·5	14·1	18·0	21·5	21·7	19·9	17·8	15·6	14·9	15·5	14·3	15·2	16·3	15·2	13·7	13·9	33·9
4	11·6	12·4	10·6	8·5	7·6	7·6	7·7	7·8	8·7	10·1	12·5	15·3	19·2	20·6	20·0	19·6	19·2	16·8	15·5	14·5	15·9	15·9	15·6	14·8	13·7	28·0
5 *d*	9·4	8·8	2·8	-1·6	-1·0	·2·3	7·8	9·9	11·5	16·1	16·2	16·9	21·5	22·8	20·7	20·6	19·3	18·5	16·5	16·3	16·8	14·2	13·1	13·8	13·1	13·2
6	12·4	10·8	10·3	9·7	8·9	10·0	10·4	10·8	11·6	12·7	13·2	14·0	17·4	18·1	16·5	18·0	19·4	17·1	17·1	16·1	18·1	15·2	15·1	5·9	13·7	28·8
7	10·0	10·3	6·7	13·6	16·0	9·9	7·5	6·0	7·0	9·4	12·7	15·1	17·2	19·0	20·8	19·9	18·5	16·3	15·8	15·6	15·1	15·8	15·1	13·3	13·6	26·6
8	14·4	13·9	10·7	10·5	11·0	9·8	8·2	8·2	7·7	8·9	10·7	14·3	18·9	21·0	20·7	18·8	18·1	16·0	14·3	14·1	14·2	14·3	14·5	14·5	13·7	27·7
9 *q*	13·6	12·9	12·6	12·4	10·6	8·9	7·9	8·6	8·6	9·6	12·5	16·3	20·6	21·3	20·9	20·2	18·7	17·8	16·9	16·2	15·4	15·1	15·3	14·7	14·5	47·6
10 *q*	13·2	12·3	11·7	10·5	9·4	8·3	8·9	9·5	9·2	8·9	12·4	15·4	19·7	21·8	22·2	21·5	20·4	18·5	17·4	17·2	17·6	17·2	15·9	14·0	14·7	53·1
11 *d*	15·9	8·6	4·0	7·0	5·7	4·7	4·7	4·0	9·9	13·4	14·1	17·1	22·5	27·1	27·1	25·3	23·3	18·9	16·4	17·6	14·1	10·5	12·5	11·8	14·0	36·2
12	11·3	9·3	8·7	14·2	12·2	9·0	7·7	6·0	7·6	8·0	11·2	14·5	17·3	19·8	21·1	20·7	19·8	16·5	14·7	14·1	13·6	13·6	13·4	14·0	13·3	18·3
13	13·9	14·1	11·9	10·5	10·3	7·7	6·0	6·0	7·6	10·8	14·1	17·4	20·8	22·6	22·2	20·9	18·9	16·0	15·7	14·0	14·0	15·9	13·5	10·7	14·0	35·5
14	11·3	12·0	11·9	8·6	8·9	9·5	7·7	5·9	8·2	9·7	12·8	16·1	19·8	20·9	20·0	18·9	17·8	17·9	18·0	16·6	15·3	16·4	13·6	13·9	13·8	31·7
15	13·2	12·0	11·4	10·2	9·6	9·3	8·7	8·8	9·6	10·5	13·0	15·5	18·6	20·9	22·8	23·6	21·1	16·6	20·2	21·5	19·6	17·4	19·1	19·2	*15·5*	72·4
16	13·3	11·5	11·0	10·4	9·4	7·1	6·7	7·3	8·1	11·3	14·6	17·0	19·1	19·3	18·8	17·4	15·6	15·3	15·6	16·2	16·6	15·7	14·1	13·6	13·5	25·0
17	13·2	11·5	9·6	9·2	8·9	7·9	7·0	7·5	9·4	10·6	14·3	17·4	19·3	20·5	20·5	20·8	20·9	18·9	16·9	16·9	18·9	16·3	15·5	14·3	14·4	46·2
18	12·9	12·2	10·5	9·6	7·5	5·1	5·1	5·9	6·8	10·7	13·6	18·8	21·6	21·7	20·9	19·9	18·1	17·9	17·7	16·3	15·2	14·5	14·5	14·0	13·8	31·0
19	10·6	16·7	12·6	9·8	7·6	7·4	7·5	8·9	11·2	12·4	13·9	16·1	18·3	19·2	19·6	18·9	18·2	17·6	17·9	17·9	16·9	15·8	15·4	14·3	14·4	44·7
20	15·1	13·3	11·5	11·5	11·7	10·5	8·6	7·6	6·7	9·6	12·4	16·9	20·7	22·3	20·8	21·4	18·9	17·0	15·4	15·1	15·2	12·4	14·2	13·6	14·3	42·4
21	14·0	13·9	13·0	11·7	8·4	5·8	5·0	5·9	6·6	11·3	15·0	18·2	22·6	24·3	23·6	22·3	19·8	18·0	16·5	16·3	16·1	16·1	15·9	15·4	14·8	55·7
22 *q*	14·2	12·4	11·5	10·5	8·7	7·5	6·1	6·0	7·8	11·3	13·2	16·2	20·7	23·9	24·6	23·5	21·1	19·0	16·2	15·9	16·0	15·2	14·2	13·2	14·5	48·9
23 *d*	12·7	12·5	12·3	11·3	8·7	7·2	6·8	7·7	8·1	9·6	12·1	17·6	22·3	24·6	24·9	24·4	22·9	19·6	18·1	18·1	19·4	8·7	-2·8	3·5	13·8	30·3
24	7·3	8·5	10·8	8·4	6·8	5·1	6·3	7·2	7·7	9·5	12·5	17·0	20·6	21·4	20·7	20·5	18·6	16·9	15·0	11·3	15·8	15·6	15·2	15·3	13·1	14·0
25	14·2	13·1	12·1	9·9	8·6	4·1	3·9	5·0	6·7	10·5	14·6	19·1	23·2	24·2	22·4	20·8	20·5	19·9	17·5	18·2	16·4	14·5	15·8	17·3	14·7	52·5
26	11·4	11·2	12·1	9·8	9·9	8·5	6·9	6·9	7·6	8·5	10·8	15·4	20·1	22·9	23·6	22·6	18·7	16·3	15·1	14·7	15·0	14·4	13·9	13·4	13·7	29·7
27	12·8	12·4	12·3	12·1	10·6	9·0	5·3	4·0	4·4	7·6	11·3	15·2	18·0	19·9	20·8	20·9	20·5	18·1	15·5	15·2	14·5	14·2	14·4	16·1	13·5	25·1
28	13·6	12·4	9·7	9·5	7·5	6·0	3·7	3·9	4·8	8·7	13·1	15·1	18·3	20·8	22·6	22·1	21·9	20·8	14·9	16·3	18·2	15·8	16·6	15·2	13·8	31·5
29	13·6	13·2	11·6	9·4	8·1	10·2	8·0	6·1	6·8	12·4	15·1	16·2	19·1	21·1	20·8	19·3	15·8	16·2	17·9	17·2	14·0	15·8	12·9	-0·6	13·3	20·2
30 *d*	3·3	9·9	16·9	16·4	22·6	17·3	9·3	5·9	7·6	9·6	11·6	14·4	15·5	15·9	15·2	14·5	14·2	13·9	13·9	13·4	12·8	12·4	12·4	12·3	13·0	11·2
31 *q*	12·2	12·0	12·0	10·7	9·2	8·2	8·5	8·5	9·9	10·8	12·5	15·9	17·8	18·8	17·8	15·2	14·1	13·2	13·2	13·6	13·6	13·5	13·6	13·7	*12·9*	8·5
Mean	12·1	11·8	10·9	10·1	9·3	7·9	*7·1*	7·2	8·3	10·7	13·2	16·3	19·7	*21·2*	20·9	20·2	18·9	17·2	16·3	16·0	15·9	14·8	14·1	13·2	13·9	
Sum 200·0′+	176·7	164·7	137·0	113·1	87·6	45·3	21·2	22·3	57·5	130·6	210·4	306·5	409·0	457·4	448·8	425·3	385·0	332·2	306·3	295·6	292·9	259·9	236·2	209·4		Grand Total 10330·9

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — JULY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	440	440	435	439	450	446	438	450	463	469	481	487	499	509	525	541	549	539	521	512	503	490	470	465	*482*	1561
2	431	404	377	407	408	432	450	463	470	477	474	469	467	469	473	477	479	480	481	477	476	476	477	473	457	967
3 *q*	471	466	465	466	469	470	472	472	470	470	466	466	463	466	467	467	469	473	470	471	474	472	474	470	469	1259
4	470	470	469	466	463	465	462	465	466	465	465	460	458	457	460	463	469	479	479	474	471	468	467	459	466	1190
5 *d*	447	435	394	387	392	405	424	444	460	454	444	449	463	498	524	537	518	501	495	481	473	477	470	454	459	1026
6	462	467	471	470	472	472	467	467	469	466	458	453	462	474	496	497	494	497	497	486	477	470	443	424	471	1311
7	421	361	371	383	372	399	444	462	463	462	462	462	459	462	470	476	481	481	482	481	480	477	474	472	448	757
8	461	455	459	467	469	466	462	462	462	461	462	456	450	452	460	467	470	474	477	473	470	469	467	469	464	1140
9 *q*	469	471	473	474	475	474	474	470	466	460	462	460	456	456	459	463	473	475	472	473	472	472	469	468	468	1236
10 *q*	468	469	470	472	473	473	471	469	465	462	455	452	446	440	443	451	458	464	468	466	464	462	465	463	462	1089
11 *d*	443	371	403	428	451	463	463	453	446	440	436	435	438	454	476	478	474	491	488	481	492	490	474	466	456	934
12	455	456	457	455	453	463	470	473	470	467	461	454	452	456	461	467	467	470	477	481	481	473	462	462	464	1143
13	460	450	446	459	465	469	471	470	468	464	460	453	453	456	458	463	469	473	476	476	476	473	465	454	464	1127
14	449	453	455	454	461	451	448	453	458	460	454	452	454	457	458	467	471	470	471	475	475	467	463	465	460	1041
15	465	465	464	465	468	467	465	463	460	458	457	456	453	456	457	463	471	476	472	474	469	483	477	473	466	1177
16	471	470	468	455	439	435	447	455	455	455	459	459	459	456	456	459	467	472	468	467	466	469	470	467	460	1044
17	466	464	464	466	466	466	467	469	465	459	457	450	448	453	458	461	461	465	469	469	466	469	465	463	463	1106
18	466	466	469	468	469	469	459	454	454	456	455	450	461	456	457	464	477	478	474	470	470	469	466	464	464	1141
19	465	462	451	459	461	462	464	466	464	457	457	457	457	465	466	468	466	465	465	465	466	469	469	468	463	1114
20	462	461	465	466	466	464	461	459	459	453	450	447	446	449	453	458	469	469	466	462	459	465	464	464	460	1037
21	464	461	454	459	461	464	461	457	453	450	445	442	446	454	461	468	475	474	469	469	470	469	465	461	461	1052
22 *q*	455	461	465	466	468	468	468	464	458	455	454	457	457	455	461	461	464	466	469	469	464	461	458	458	462	1082
23 *d*	461	461	464	464	465	463	457	454	451	452	450	448	446	442	443	447	456	466	466	465	469	455	374	402	451	821
24	399	429	445	448	462	468	474	478	473	466	466	465	461	459	464	470	478	480	485	492	483	474	469	465	465	1153
25	459	459	462	465	469	469	472	465	462	466	470	464	458	455	461	468	478	480	499	501	493	487	473	450	470	1285
26	422	419	429	427	449	457	466	469	469	468	469	464	456	454	461	462	477	478	475	469	469	468	466	466	459	1009
27	465	466	468	468	468	469	471	467	468	469	466	462	457	453	453	457	464	469	471	469	469	473	465	462	465	1169
28	436	429	444	455	461	462	464	464	459	453	453	453	44ᵥ	446	445	458	475	493	515	498	476	470	466	461	462	1082
29	451	456	456	449	457	431	425	445	455	459	458	459	457	457	457	462	480	485	481	484	485	477	454	406	458	986
30 *d*	390	338	284	348	349	313	344	407	457	471	468	464	461	466	469	469	468	468	468	469	474	474	471	471	*428*	261
31 *q*	471	471	470	471	471	473	475	475	471	466	464	461	455	458	462	466	469	470	468	466	469	469	469	469	468	1229
Mean	452	445	*444*	449	452	453	457	461	462	461	459	457	456	459	465	470	475	478	*479*	476	474	472	464	459	462	
Sum 13,000γ+	1015	806	767	926	1022	1048	1156	1284	1329	1290	1238	1166	1144	1240	1414	1575	1736	1821	1834	1765	1701	1637	1381	1234		Grand Total 343,529

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — JULY 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1 *d*	2233 3342	22	2233 3342	22	2122 2322	16	1122 2222	14	1	15
2	3210 1001	8	2200 1001	6	3210 0000	6	4320 0000	9	1	16
3 *q*	1000 0021	4	1000 0021	4	1000 0011	3	0000 0000	0	0	16
4	0100 1212	7	0100 1211	6	0100 0012	4	1000 0002	3	1	16
5 *d*	3333 3322	22	2233 3321	19	3312 2112	15	3232 3322	20	1	16
6	0102 3323	14	0102 3323	14	0001 2113	8	1001 3213	11	1	16
7	3411 2221	16	3411 2221	16	3311 1111	12	4320 1000	10	1	16
8	1001 2200	6	1001 2200	6	1001 1100	4	1001 0000	2	0	16
9 *q*	0001 1110	4	0000 1110	3	0001 0000	1	0000 0000	0	0	16
10 *q*	0000 1101	3	0000 1101	3	0000 1001	2	0000 1000	1	0	16
11 *d*	4222 4332	22	4222 4332	22	3121 3222	16	4321 3222	19	2	16
12	2221 1211	12	2221 1211	12	2221 0101	9	1101 0001	4	1	16
13	1111 1132	11	1001 1121	7	1110 0132	9	1000 0001	2	1	16
14	1221 3211	13	1221 3211	13	1211 0001	6	1110 1101	6	1	16
15	0011 2332	12	0011 2331	11	0000 1332	9	0000 1221	6	1	16
16	1101 0001	4	1101 0001	4	1100 0001	3	0211 0100	5	0	16
17	1001 1221	8	1001 1221	8	0000 0121	4	0000 1111	4	0	16
18	1111 3211	11	1111 3211	11	0111 1101	6	0001 1000	2	1	16
19	3110 1111	9	2000 1111	6	3110 0000	5	2100 1000	4	1	16
20	1110 2112	9	1010 2111	7	1100 2102	7	1000 1110	4	1	16
21	1110 1120	7	1010 1120	6	0100 0000	1	1000 0000	1	0	16
22 *q*	1000 1100	3	0000 1100	2	1000 0010	2	1000 0010	2	0	16
23 *d*	0001 2335	14	0001 2335	14	0001 1133	9	0000 0135	9	1	16
24	3222 1231	16	2102 1230	11	3220 0031	11	3200 0010	6	1	16
25	0112 2332	14	0012 2332	13	0110 1122	8	0001 0023	6	1	16
26	2201 2310	11	2101 2310	10	2201 1100	7	2210 1100	7	1	16
27	0010 0112	5	0000 0111	3	0010 0002	3	0000 0010	1	0	16
28	2111 3332	16	2001 3332	14	1111 0131	9	2001 1230	9	1	16
29	2321 1224	17	2320 1223	15	2221 0224	15	1320 0214	13	1	16
30 *d*	4551 0000	15	4551 0000	15	4330 0000	10	5450 1000	15	2	16
31 *q*	0000 0000	0	0000 0000	0	0000 0000	0	0000 0000	0	0	16
								Mean	0·74	16

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — AUGUST 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 16,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *q*	693	694	695	698	700	701	699	692	683	667	659	662	674	692	706	706	706	725	722	717	716	713	710	710	697	740
2 *q*	711	708	706	706	708	703	699	691	684	675	665	666	676	689	703	715	716	712	709	709	709	706	705	703	699	774
3 *q*	703	702	700	703	708	708	695	685	677	666	659	657	667	695	710	719	723	725	717	715	713	708	710	708	699	773
4	703	706	708	708	706	698	689	680	682	680	677	685	690	706	685	737	726	715	742	744	724	716	710	706	705	923
5	706	717	707	707	709	708	704	699	693	685	699	673	692	699	706	699	720	734	731	725	723	716	709	708	*707*	969
6	708	709	706	709	714	709	709	706	696	686	676	674	670	678	696	712	716	724	742	737	737	716	713	710	706	953
7	710	709	703	705	711	710	706	692	673	669	670	663	679	688	698	700	719	719	739	740	730	715	711	726	704	885
8	709	698	712	729	719	716	698	692	687	672	667	669	672	686	689	705	719	728	739	726	716	712	714	712	704	886
9	706	699	702	705	706	708	702	690	675	656	645	650	663	679	696	710	708	720	726	726	722	723	722	716	698	755
10 *d*	715	707	700	702	698	696	702	700	683	669	666	664	666	679	709	703	699	715	721	718	729	729	704	698	699	772
11 *d*	702	701	692	700	709	706	702	686	672	666	668	665	672	687	726	717	714	728	755	756	720	703	686	678	700	811
12	688	685	688	698	699	695	688	683	669	665	658	658	663	687	697	710	725	731	721	722	722	712	705	701	695	670
13	698	698	694	694	698	697	689	679	671	662	663	663	665	679	704	724	745	742	709	714	715	709	712	698	697	722
14	704	694	688	689	696	684	689	664	667	662	655	668	681	690	697	705	718	721	722	720	724	711	711	705	694	665
15	702	704	702	696	702	701	691	685	682	676	672	678	673	697	707	722	722	723	727	724	717	715	711	722	702	851
16	705	698	698	702	703	697	691	684	678	672	672	668	679	700	691	726	734	735	725	721	722	725	727	704	702	857
17 *d*	692	695	695	685	691	706	695	685	681	675	667	691	663	695	716	728	730	749	725	723	725	712	705	704	701	833
18 *d*	714	691	688	696	698	694	689	680	679	679	675	672	685	729	729	725	734	725	725	719	722	712	695	693	702	848
19	695	689	694	695	695	685	672	679	667	651	652	655	665	681	703	709	705	713	715	726	726	719	713	711	692	615
20	710	708	708	702	688	687	693	693	683	677	672	677	701	699	725	750	740	728	722	716	718	718	705	704	705	924
21	700	697	703	702	702	703	700	691	674	666	657	666	672	693	720	717	718	710	714	718	711	710	709	710	698	763
22 *q*	707	704	707	707	705	700	694	688	677	664	654	657	667	674	689	702	717	720	717	717	716	714	717	711	697	725
23 *q*	707	707	700	699	704	699	691	682	667	654	650	644	656	677	700	714	720	729	742	723	719	714	706	704	696	708
24	711	707	708	704	698	699	696	683	661	651	645	654	680	681	707	710	723	733	724	719	720	726	723	717	699	780
25 *d*	714	716	717	708	700	699	693	680	684	671	657	657	664	667	700	727	707	717	722	727	708	708	710	696	698	749
26	679	695	702	700	697	692	684	673	664	660	651	660	674	674	686	695	713	710	722	736	717	710	713	697	*692*	604
27	697	701	704	691	694	697	690	681	670	652	650	662	681	698	707	699	696	704	713	710	712	715	717	709	694	650
28	704	700	704	701	697	697	688	681	671	666	668	681	691	694	700	710	720	710	703	707	710	709	710	708	697	730
29	713	707	705	703	699	698	694	688	677	674	671	680	690	687	687	693	697	706	714	714	720	723	708	703	698	751
30	705	705	706	703	693	693	707	696	684	684	671	668	672	683	683	697	710	718	723	730	731	723	708	694	699	787
31	711	711	694	698	707	704	696	684	657	662	664	677	690	686	683	694	696	717	720	723	714	715	720	717	697	740
Mean	704	702	701	701	702	700	695	686	676	668	*664*	667	675	689	702	712	717	722	*724*	723	720	715	710	706	699	
Sum 20,000γ+	1822	1762	1736	1745	1754	1690	1535	1272	968	714	575	664	933	1349	1755	2080	2236	2386	2448	2422	2308	2157	2019	1883		Grand Total 520,213

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — AUGUST 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 300·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *q*	13·5	13·0	12·5	12·4	10·4	8·4	7·5	8·0	8·7	10·3	13·1	16·7	20·6	21·8	20·2	18·3	16·2	14·8	15·8	16·1	16·1	15·9	15·7	15·2	14·2	41·2
2 *q*	14·8	13·8	13·0	11·5	9·7	8·4	7·0	7·6	8·5	10·3	13·1	15·2	18·1	19·8	18·2	15·2	13·1	11·6	13·0	14·2	14·9	15·9	14·2	14·2	13·1	15·3
3 *q*	14·0	13·4	12·7	12·9	10·9	9·5	7·9	6·5	7·9	11·5	15·2	18·2	19·6	20·3	18·2	15·3	15·5	15·1	14·9	15·9	16·3	15·4	16·1	13·7	14·0	36·9
4	12·9	12·5	12·2	10·8	9·6	7·6	6·3	7·9	9·5	11·1	13·2	17·5	20·1	21·7	20·1	18·2	16·5	15·6	17·0	16·4	14·6	14·6	13·7	15·4	14·0	35·0
5	17·5	9·6	10·4	11·5	11·0	9·4	10·1	12·1	13·4	15·3	16·9	18·9	23·6	24·7	23·3	21·2	17·7	15·9	15·6	16·1	15·9	15·8	15·2	14·3	*15·6*	75·4
6	13·4	13·3	11·6	11·6	9·9	8·6	7·1	7·6	9·4	10·1	12·0	14·5	18·2	20·8	20·7	18·5	16·2	14·3	13·4	12·7	14·3	14·8	15·5	15·4	13·5	23·9
7	11·7	12·8	9·7	7·6	7·9	7·3	7·6	7·9	10·9	13·3	15·2	18·6	19·8	22·0	21·4	19·1	17·3	15·2	14·8	15·8	11·5	11·2	14·2	8·9	13·4	21·7
8	6·6	13·1	17·8	11·0	6·4	8·1	11·3	15·2	17·7	15·2	15·7	16·8	19·8	22·4	22·4	20·4	19·1	15·4	14·3	15·2	15·1	15·4	16·0	11·7	15·1	62·1
9	12·9	12·5	11·6	11·3	9·6	8·6	7·5	7·7	8·7	11·3	15·2	18·6	22·1	24·5	23·6	22·4	18·3	15·4	14·9	14·2	14·2	14·4	12·4	12·2	14·3	44·1
10 *d*	12·2	15·2	14·3	10·7	6·3	8·7	5·8	3·3	5·3	7·8	11·2	16·1	21·8	23·5	25·6	21·8	17·5	15·7	14·2	14·2	14·7	13·3	3·0	6·1	12·8	8·3
11 *d*	11·6	11·4	14·6	13·6	13·3	7·3	2·3	4·4	5·9	13·2	15·6	20·5	24·4	26·3	28·3	25·8	19·9	16·4	16·2	5·4	8·8	4·4	2·3	9·6	13·4	21·5
12	6·9	11·2	14·9	12·0	10·6	8·4	8·0	8·7	10·1	12·2	15·8	18·9	21·4	22·1	20·9	19·0	16·5	15·5	15·3	15·6	15·8	15·6	14·0	13·8	14·3	43·2
13	14·2	14·3	13·3	10·6	9·1	8·0	6·5	6·3	7·6	10·2	13·3	17·5	20·4	21·3	21·3	19·8	16·2	17·0	15·3	17·0	15·8	11·9	13·8	14·7	14·0	35·4
14	13·4	13·7	14·2	13·7	8·7	12·9	11·6	9·9	12·5	14·1	15·5	18·2	21·4	21·8	19·9	17·1	15·9	14·4	14·4	15·3	12·3	14·1	15·8	14·9	14·8	55·7
15	13·4	12·1	11·5	11·7	8·6	8·6	8·7	9·7	11·1	13·5	15·9	19·0	19·5	21·3	19·9	18·9	18·2	17·0	18·0	16·9	16·1	13·8	13·7	11·5	14·5	48·6
16	12·6	9·2	9·8	8·6	8·8	9·2	8·6	7·3	8·9	10·9	14·5	18·3	21·3	22·9	21·8	22·2	20·9	19·0	17·6	17·7	15·4	16·7	9·5	4·7	14·0	36·4
17 *d*	6·3	11·6	10·0	9·0	12·6	10·6	9·9	10·5	9·8	11·2	15·5	20·7	23·5	23·5	23·7	20·9	14·9	16·1	18·9	16·9	16·3	16·2	15·8	15·2	15·0	59·6
18 *d*	12·5	3·3	2·6	5·1	6·7	6·7	5·9	7·6	8·9	10·5	12·6	15·2	16·6	21·2	21·7	20·8	20·5	18·4	18·0	16·5	14·5	14·2	11·2	12·3	*12·6*	3·5
19	12·9	13·9	9·2	8·7	8·7	6·2	7·6	7·1	8·3	11·8	15·2	18·8	21·8	23·6	23·3	21·8	19·0	17·5	16·8	15·7	12·2	14·5	13·2	14·5	14·3	42·3
20	14·8	12·6	10·4	9·1	11·0	13·6	9·8	10·5	8·9	10·3	14·5	18·9	23·6	24·5	24·2	22·7	19·7	14·2	13·6	15·3	14·3	9·2	10·5	12·9	14·5	49·1
21	12·4	13·3	14·4	11·5	11·4	10·3	7·7	6·8	7·1	9·7	13·2	18·3	23·0	23·8	22·8	19·7	16·6	14·1	13·2	14·3	14·3	14·4	14·9	14·3	14·2	41·5
22 *q*	14·0	13·2	13·0	12·2	11·3	8·3	7·4	7·3	8·0	10·8	14·9	19·7	23·6	22·5	20·7	18·2	16·1	13·2	12·8	15·0	15·0	14·3	14·9	14·2	14·2	40·6
23 *q*	13·6	13·8	12·5	13·4	10·1	7·6	6·7	6·3	7·5	11·2	16·2	20·8	23·1	23·2	20·9	17·8	15·3	14·2	15·0	12·2	15·8	16·1	15·2	14·0	14·3	42·5
24	13·4	13·3	8·7	7·8	7·7	7·2	5·9	6·0	7·7	10·8	16·0	20·0	23·2	23·6	24·7	23·3	21·2	20·0	18·1	16·4	16·3	16·0	15·0	12·4	14·8	54·7
25 *d*	13·3	12·7	12·4	11·8	10·9	6·7	6·3	6·3	9·1	11·9	14·5	19·6	25·2	26·2	27·7	26·4	19·0	18·2	15·5	16·1	12·3	15·2	15·1	11·6	15·2	64·0
26	6·8	11·7	11·7	10·5	10·0	8·7	7·4	6·3	9·8	12·8	15·6	19·8	22·2	21·9	20·3	19·4	18·8	16·6	16·3	12·4	12·1	15·7	10·6	11·2	13·7	28·6
27	13·1	12·0	12·4	14·0	9·4	5·9	6·3	7·6	10·1	13·6	16·0	17·1	19·2	21·1	21·1	18·9	17·6	15·8	15·0	14·6	14·5	14·5	12·6	10·1	13·9	32·5
28	13·2	12·9	12·4	11·5	10·7	10·3	9·0	9·5	11·3	13·1	16·8	20·8	23·3	22·8	20·8	19·1	17·9	13·6	15·3	15·3	14·9	14·5	15·5	13·3	14·9	57·8
29	14·5	13·3	12·4	11·7	10·5	9·0	7·7	9·5	12·2	14·2	17·0	18·8	23·7	22·5	18·6	16·9	14·2	13·3	14·2	15·2	15·3	15·3	14·3	12·5	14·5	46·8
30	13·2	13·1	12·4	10·8	10·8	12·1	10·9	11·2	13·1	12·4	14·3	17·4	20·8	22·3	19·0	17·9	16·0	13·6	12·9	7·3	10·5	7·1	2·8	6·8	12·9	8·7
31	9·3	9·5	12·0	13·3	10·3	8·3	9·6	11·4	13·3	17·8	17·8	18·6	21·4	22·6	21·2	18·9	16·2	14·0	12·6	13·6	14·7	14·7	8·9	5·9	14·0	35·9
Mean	12·4	12·3	11·9	11·0	9·8	8·7	*7·8*	8·2	9·7	12·0	14·9	18·3	21·5	22·7	21·8	19·9	17·3	15·5	15·3	14·7	14·3	14·0	12·8	12·2	14·1	
Sum 200·0′+	184·9	181·3	170·6	141·9	102·9	70·5	41·9	54·0	101·2	172·4	261·5	368·0	466·3	502·5	476·5	415·9	338·0	281·1	272·9	255·5	244·8	235·1	195·6	177·5		Grand Total 10512·8

GEOMAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — AUGUST 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *q*	470	470	470	467	469	469	469	470	470	467	462	454	450	452	459	471	470	470	474	470	470	470	469	467	467	1199
2 *q*	468	468	470	472	472	472	470	467	469	467	465	459	458	459	462	466	469	470	468	464	464	465	466	466	467	1196
3 *q*	467	469	468	467	467	468	468	467	463	462	463	462	455	452	461	465	466	469	471	467	464	465	462	465	465	1153
4	469	466	467	468	470	470	469	459	456	453	447	445	452	462	479	482	501	494	478	482	482	475	471	468	*469*	1265
5	456	422	443	459	466	467	466	462	454	453	452	454	456	468	474	481	479	475	476	473	471	469	469	468	463	1113
6	469	469	470	470	468	472	465	459	455	458	460	454	446	447	453	466	474	472	468	475	475	472	466	459	464	1142
7	450	438	450	462	465	466	466	465	462	453	453	458	447	455	470	475	483	486	475	474	476	475	467	442	463	1113
8	441	442	402	404	445	453	461	462	464	462	456	456	455	463	470	480	490	504	503	487	477	470	458	439	460	1044
9	448	458	464	467	470	472	476	478	476	470	462	450	446	446	451	462	469	470	467	466	466	462	459	457	463	1112
10 *d*	439	432	422	426	439	447	454	462	467	465	457	458	467	472	466	482	482	474	469	466	464	460	445	440	456	955
11 *d*	448	446	446	436	452	464	460	458	458	450	445	439	433	439	445	470	490	493	483	498	474	457	442	406	455	932
12	390	406	425	448	462	469	474	474	474	470	466	462	456	456	466	472	471	472	472	471	469	455	462	458	458	1000
13	458	450	453	456	462	468	473	476	476	472	464	463	458	457	461	470	484	490	492	476	472	475	464	458	468	1228
14	427	424	414	416	431	436	433	452	454	458	461	454	458	466	466	467	467	469	474	474	474	473	465	462	*453*	875
15	453	460	462	462	460	462	462	463	459	457	455	455	456	455	461	460	467	473	468	468	470	469	466	452	461	1075
16	448	450	457	459	462	462	461	463	460	455	451	452	452	460	469	464	473	479	480	473	469	464	457	440	461	1060
17 *d*	429	428	433	413	413	425	437	445	445	445	451	450	463	454	466	482	500	494	485	474	469	468	468	467	454	904
18 *d*	425	423	446	456	462	461	455	456	453	450	450	453	454	458	479	491	503	503	489	482	478	468	469	470	464	1134
19	460	440	450	461	463	466	462	456	454	452	448	446	444	450	460	468	474	472	470	460	467	467	466	460	459	1016
20	450	448	454	462	463	449	448	452	453	456	456	457	461	470	473	474	486	497	488	473	467	466	464	462	464	1129
21	460	462	456	459	466	470	468	467	463	456	454	449	450	456	463	456	483	482	476	469	466	464	464	458	463	1117
22 *q*	455	458	463	467	471	473	476	475	472	466	454	444	449	454	462	467	470	478	478	472	466	466	462	458	465	1156
23 *q*	460	462	465	465	462	470	473	472	470	460	451	448	446	448	455	461	467	470	472	487	478	472	470	470	465	1154
24	464	440	432	448	457	462	465	470	468	461	457	449	444	447	449	462	468	476	479	480	469	463	463	466	460	1039
25 *d*	465	462	462	466	468	465	461	456	452	458	454	452	454	457	465	485	513	495	490	482	492	478	468	412	467	1212
26	410	444	455	463	471	473	473	475	468	462	457	448	446	452	458	464	466	476	477	472	477	469	449	450	461	1055
27	449	455	455	448	452	459	462	461	459	461	456	450	450	453	460	474	472	469	467	471	470	467	447	451	459	1018
28	455	460	462	464	466	464	465	464	462	457	453	450	450	458	461	461	473	483	477	470	467	469	466	464	463	1121
29	456	457	460	465	466	466	467	465	458	448	446	446	451	466	474	474	473	466	460	462	462	462	470	472	462	1092
30	467	467	466	466	466	455	444	450	452	452	458	459	462	470	478	481	481	480	480	479	462	453	443	435	463	1106
31	428	434	449	447	447	454	458	462	473	462	460	460	463	473	477	484	482	476	478	474	473	470	453	438	461	1075
Mean	449	*449*	451	455	460	462	463	463	462	459	456	453	453	457	464	471	479	*480*	477	474	471	467	462	454	462	
Sum 13,000γ+	934	910	991	1089	1253	1329	1341	1363	1319	1218	1124	1036	1032	1175	1393	1617	1846	1877	1784	1691	1600	1478	1310	1080		Grand Total 343,790

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — AUGUST 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1 *q*	0002 1220	7	0002 1220	7	0000 0100	1	0000 0100	1	0	16
2 *q*	0001 0001	2	0001 0001	2	0000 0000	0	0000 0000	0	0	16
3 *q*	0000 0111	3	0000 0111	3	0000 0001	1	0000 0000	0	0	16
4	0011 3322	12	0011 3320	10	0011 1112	7	0011 2210	7	1	16
5	3101 2220	11	2001 2220	9	3100 1000	5	3100 1100	6	1	16
6	0211 1122	10	0001 1120	5	0210 0112	7	0101 0010	3	1	16
7	2121 1123	13	1021 1123	11	2111 0023	10	1001 1113	8	1	16
8	3111 2222	14	2110 2222	12	3101 1212	11	3210 0222	12	1	16
9	1011 2311	10	1010 2311	9	0001 1101	4	1000 0101	3	0	17
10 *d*	2222 3323	19	1112 3323	16	2220 2213	14	2211 1202	11	1	16
11 *d*	2232 3443	23	2122 3432	19	2232 1243	19	1210 1334	15	2	16
12	3220 2121	13	2010 2121	9	3220 0021	10	3200 0001	6	1	16
13	1001 2322	11	0001 2322	10	1000 0212	6	1000 0111	4	1	16
14	2221 1032	13	2221 1011	10	2220 0032	11	2220 0001	7	1	16
15	1112 2212	12	0102 2212	10	1111 1001	6	1100 0101	4	1	16
16	2112 2323	16	1002 2322	12	2110 1113	10	1000 1102	5	1	16
17 *d*	3324 3322	22	2324 3321	20	3222 1322	17	2212 1210	11	1	16
18 *d*	3222 3222	18	3122 3222	17	3211 2122	14	3101 2121	11	1	16
19	2121 2222	14	1121 2221	12	2110 1122	10	2110 1110	7	0	16
20	1222 2312	15	1212 2311	13	1221 1212	12	1221 1210	10	1	16
21	1111 2111	9	1011 2110	7	1111 0011	6	1100 0000	2	0	16
22 *q*	1102 2210	9	1002 2200	7	1100 0110	4	1000 0000	1	0	16
23 *q*	0100 0120	4	0100 0120	4	0100 0020	3	0100 0010	2	0	17
24	2112 2221	13	2112 2221	13	1001 1101	5	2200 0111	7	1	16
25 *d*	1122 2324	17	1122 2322	15	0111 1224	12	0010 1214	9	1	17
26	3021 2232	15	2001 2232	12	3020 1132	12	3000 0112	7	1	17
27	1212 2212	13	1102 2212	11	1211 1002	8	1100 0102	5	1	16
28	1101 1321	10	1101 1321	10	0000 1101	3	1000 0210	4	1	16
29	2011 2212	11	2011 1212	10	2011 2002	8	1000 0001	2	0	17
30	0221 2133	14	0221 2122	12	0120 1033	10	0210 0011	5	1	17
31	3223 2213	18	2123 2211	14	3211 0013	11	2000 0102	5	1	16
								Mean	0·74	16

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 14,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	696	698	684	696	705	700	679	674	684	670	667	673	679	710	722	708	712	743	725	719	703	693	699	690	697	2729
2	695	697	687	687	700	693	683	662	664	647	648	659	693	706	709	733	707	723	705	700	707	699	701	698	692	2603
3	697	693	691	693	696	695	689	683	670	656	646	666	677	684	708	711	719	719	708	706	709	712	714	698	693	2640
4	696	695	696	696	690	696	696	680	680	660	659	666	679	676	688	702	700	703	710	705	706	706	706	705	691	2596
5 *q*	703	699	697	699	702	698	691	680	672	670	676	676	683	690	693	699	706	709	707	712	710	706	703	706	695	2687
6	705	705	695	695	706	702	695	684	673	663	663	666	678	686	694	706	706	709	713	716	713	703	703	706	695	2685
7	706	706	703	703	702	702	698	690	677	670	670	670	677	690	728	729	721	739	718	716	713	708	707	701	702	2844
8	706	708	705	702	701	700	694	688	681	670	667	664	680	686	687	711	722	703	723	729	704	695	702	703	697	2731
9	709	700	693	684	700	697	696	685	673	663	651	641	670	665	683	692	694	700	717	717	710	698	696	684	688	2518
10 *q*	689	690	694	700	703	699	699	693	686	677	666	660	660	669	686	693	699	702	706	710	712	712	709	709	693	2623
11 *q*	707	705	705	705	705	705	702	693	685	675	668	662	672	685	695	702	708	712	708	708	709	709	708	708	698	2741
12 *q*	706	706	706	705	702	702	701	695	689	679	674	674	674	681	678	690	699	705	712	719	717	707	707	708	697	2736
13	711	711	708	705	702	716	734	722	679	670	681	650	662	682	689	731	828	753	742	715	705	685	669	678	*705*	2928
14	682	695	691	689	691	687	680	678	669	655	658	662	662	668	675	691	699	702	707	707	720	705	697	695	686	2465
15	669	692	680	689	709	695	664	673	673	668	665	660	665	674	680	689	696	705	708	714	724	704	699	703	687	2498
16	705	664	653	695	694	694	698	695	692	683	675	675	669	677	677	686	699	711	707	708	708	709	719	711	692	2604
17	705	704	699	698	699	698	694	692	684	676	669	665	666	669	679	693	696	699	702	708	708	710	711	705	693	2629
18	709	708	708	708	707	706	702	693	684	673	670	661	655	670	692	693	704	719	720	720	697	673	670	660	692	2602
19	651	662	695	697	702	704	687	694	677	665	658	664	680	680	695	694	706	713	714	715	727	717	705	701	692	2603
20 *d*	698	701	702	699	701	701	703	672	656	659	636	646	639	649	728	716	725	712	702	718	722	705	692	564	685	2446
21 *d*	520	473	447	422	579	549	582	573	585	628	634	652	691	689	775	757	805	714	720	681	634	627	647	567	*623*	951
22	627	684	681	677	667	683	681	675	671	664	661	664	665	672	680	680	686	712	693	688	688	691	691	691	678	2272
23 *q*	691	690	690	689	689	690	690	684	670	661	654	657	663	658	671	682	690	697	699	701	701	700	700	697	684	2414
24	697	699	699	699	697	697	696	691	681	662	655	657	657	665	668	678	675	700	696	704	713	723	695	695	687	2499
25	698	698	697	699	698	701	701	697	694	684	673	668	664	668	677	688	691	694	704	707	696	698	708	700	692	2603
26	698	698	698	698	697	698	698	694	678	668	657	655	662	676	686	695	695	701	711	711	713	694	701	699	691	2581
27	689	697	694	697	697	698	697	692	684	671	664	662	671	678	675	686	700	700	700	707	708	710	711	713	692	2601
28 *d*	712	712	714	715	710	690	683	684	691	664	643	605	623	673	678	691	699	784	862	706	684	603	546	610	683	2382
29 *d*	481	593	632	625	654	635	600	600	625	641	661	651	647	654	672	739	757	763	717	665	525	557	594	572	636	1260
30 *d*	585	543	601	674	683	701	657	693	678	655	640	655	680	701	680	709	748	703	690	688	689	691	694	707	673	2145
Mean	678	681	681	685	693	691	686	680	673	665	660	*659*	668	678	692	703	713	*715*	715	707	699	692	690	683	687	
Sum 19,000γ+	1343	1426	1445	1540	1788	1732	1570	1409	1205	947	809	786	1043	1331	1748	2074	2392	2449	2446	2220	1975	1750	1704	1484		Grand Total 494,616

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	9·6	14·3	19·0	14·6	12·0	8·9	14·6	17·0	15·1	14·0	14·0	17·0	19·9	20·9	14·2	16·1	15·6	16·0	15·7	7·1	10·0	14·2	14·0	8·5	14·3	242·3
2	10·7	8·9	8·1	13·6	9·0	7·9	8·6	6·5	12·0	15·2	16·2	19·1	18·6	19·8	18·9	18·2	10·9	10·3	13·1	14·5	14·2	13·6	14·4	14·1	13·2	216·4
3	15·0	14·2	13·5	11·8	10·8	9·7	8·8	9·6	10·2	12·6	14·2	18·7	19·9	19·1	16·8	13·4	11·4	9·6	14·2	16·0	15·5	15·2	12·4	16·0	13·7	228·6
4	14·3	13·6	14·0	14·2	13·5	9·8	9·7	8·4	9·6	11·2	14·2	17·1	19·1	18·8	16·4	14·3	12·3	11·3	10·9	13·4	14·1	14·1	13·7	13·6	13·4	221·6
5 *q*	15·0	13·3	12·4	11·7	10·6	9·6	8·9	9·3	10·8	14·0	16·2	18·2	19·9	19·6	17·2	15·1	14·0	12·4	11·4	13·2	14·3	14·4	13·6	13·3	13·7	228·4
6	13·3	14·0	14·2	14·5	12·0	9·7	8·5	8·5	9·6	12·8	15·9	19·8	22·4	22·4	20·8	18·2	15·9	15·1	14·0	12·7	13·2	13·4	13·1	12·5	14·4	246·5
7	12·5	12·5	12·4	12·0	11·1	9·6	8·6	8·6	9·4	12·1	15·2	18·3	21·4	22·2	24·9	24·8	20·8	20·1	17·4	18·3	17·8	15·9	14·9	13·6	*15·6*	274·4
8	12·7	12·4	10·5	10·7	10·6	9·8	8·5	8·8	9·8	11·5	14·2	18·9	23·3	25·3	21·4	22·0	20·5	17·0	14·3	6·3	6·7	8·9	10·7	10·7	13·6	225·5
9	10·4	10·4	8·9	15·6	8·6	7·7	8·6	9·4	10·3	13·0	17·8	19·8	23·7	22·2	20·2	17·8	15·2	14·2	13·6	15·0	11·3	7·6	7·6	6·8	13·2	215·7
10 *q*	4·0	6·5	9·6	8·8	9·4	9·7	9·5	8·8	9·5	11·0	13·3	17·1	20·4	21·8	21·7	19·6	17·5	16·1	15·5	15·4	14·9	14·2	13·6	13·3	13·4	221·2
11 *q*	13·1	12·9	12·7	12·4	11·6	10·8	9·3	8·6	8·4	9·9	12·5	16·1	19·6	21·6	20·8	19·2	17·0	16·1	15·6	15·1	14·9	14·2	14·1	14·2	14·2	240·7
12 *q*	13·6	13·3	12·5	12·1	11·4	10·6	9·5	8·7	8·8	10·5	12·3	15·3	17·9	20·1	18·8	17·1	15·8	15·1	15·0	15·0	16·0	14·3	14·3	14·1	13·8	232·1
13	13·1	12·0	11·6	10·8	9·7	5·8	5·8	7·7	5·1	13·4	19·0	18·1	19·8	20·9	21·6	24·5	19·6	17·7	14·2	9·4	13·6	8·8	11·4	12·0	13·6	225·6
14	14·5	11·7	12·0	11·0	11·5	10·3	9·8	9·5	10·7	12·9	14·4	19·2	22·7	23·5	23·6	17·5	16·6	13·7	12·6	14·5	10·1	10·3	11·5	14·6	14·1	238·7
15	14·8	6·0	6·0	13·3	9·3	9·4	11·0	13·3	9·6	10·0	13·4	17·0	18·3	19·1	19·1	18·4	16·7	15·3	15·2	15·0	11·8	12·9	13·4	12·9	13·4	221·2
16	6·3	5·9	7·4	6·6	8·4	10·5	9·0	9·5	9·9	11·5	13·7	17·0	19·8	20·8	19·9	17·9	11·6	12·2	12·8	14·1	14·4	13·6	10·8	11·4	12·3	195·0
17	11·6	12·4	11·0	13·5	11·5	10·7	9·4	9·6	10·5	12·7	14·1	16·4	18·9	19·0	18·6	18·1	17·5	15·3	16·0	16·1	14·9	14·2	14·0	13·7	14·2	239·7
18	13·5	13·3	12·9	12·4	12·3	11·8	11·4	10·2	9·7	10·2	13·3	18·1	21·6	21·8	22·2	20·4	18·8	17·3	15·9	8·1	6·9	6·4	4·7	-0·7	13·0	212·5
19	1·3	11·4	10·9	9·4	9·0	8·1	11·6	8·9	9·5	12·9	15·6	19·9	22·7	22·2	21·0	19·0	17·5	16·6	15·0	16·6	10·7	12·1	13·4	11·6	13·6	226·9
20 *d*	10·5	9·2	8·2	5·5	15·2	10·5	10·0	7·5	8·3	14·0	15·8	18·9	18·9	19·8	11·3	18·1	22·6	20·5	20·6	19·6	14·1	3·1	7·6	16·6	13·6	226·4
21 *d*	17·5	0·3	0·0	-31·6	-0·9	-0·5	9·6	20·7	19·9	12·4	18·2	19·2	20·9	21·8	18·9	18·6	7·7	13·3	16·1	5·6	9·0	8·2	3·2	3·8	9·7	131·9
22	11·0	11·5	10·2	8·2	10·0	10·4	10·5	9·6	10·3	11·9	13·0	15·0	17·5	17·6	16·7	14·5	13·3	12·2	13·3	14·4	14·2	13·4	13·0	12·9	12·7	204·6
23 *q*	12·7	12·6	12·3	12·0	11·6	11·3	10·3	9·1	9·7	11·4	13·8	16·8	19·1	17·2	16·9	15·5	14·2	13·7	13·5	13·2	13·0	12·9	13·1	13·0	13·3	218·9
24	12·9	12·7	12·6	12·1	11·9	11·4	10·3	9·2	8·0	10·4	13·3	16·9	18·5	20·9	20·9	20·3	13·4	12·8	14·2	13·5	11·9	9·3	6·8	5·9	12·9	210·1
25	12·1	13·3	12·4	11·7	11·4	10·7	10·5	10·3	9·3	9·5	11·2	14·2	17·8	19·2	19·6	19·1	18·0	16·9	16·2	12·7	12·8	13·3	13·0	5·9	13·4	221·1
26	11·7	12·5	11·6	11·5	10·9	10·4	9·3	7·9	8·8	10·5	12·4	15·5	17·9	18·6	18·6	17·1	16·1	15·9	15·5	15·0	11·4	14·0	12·2	6·6	13·0	211·9
27	8·4	10·3	11·6	10·5	11·4	11·5	10·6	9·9	9·6	10·2	12·2	15·8	20·8	21·1	19·8	17·1	15·8	13·1	14·2	14·2	14·2	13·4	14·4	14·2	13·5	224·3
28 *d*	13·4	12·4	11·4	9·7	6·9	14·2	8·8	16·1	8·7	11·7	13·8	16·6	20·8	24·2	23·6	21·8	17·4	14·8	14·7	6·9	1·0	4·2	-6·2	1·7	12·0	188·6
29 *d*	-6·2	-10·5	-2·0	4·2	9·6	11·8	8·6	13·8	12·4	9·3	12·7	14·3	16·2	17·7	13·8	8·9	13·3	13·4	7·3	6·3	4·3	0·0	11·5	5·4	*8·2*	96·1
30 *d*	-1·7	13·3	2·0	3·8	5·7	8·7	11·2	9·1	12·4	10·8	12·1	16·9	16·9	17·7	19·2	18·2	1·8	10·8	12·7	13·0	13·3	13·7	14·5	13·8	11·2	169·9
Mean	10·7	10·5	10·3	*9·5*	10·2	9·7	9·7	10·1	10·2	11·8	14·3	17·4	19·8	*20·6*	19·3	18·0	15·3	14·6	14·4	13·0	12·1	11·5	11·3	10·9	13·1	
Sum 200·0′+	121·6	116·6	109·9	86·6	106·0	90·8	90·8	104·1	105·9	153·5	228·0	321·2	395·2	416·9	377·4	340·8	258·8	238·8	230·7	190·2	164·5	143·8	138·7	126·0		Grand Total 9456·8

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 9000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	431	444	434	415	424	426	432	432	443	458	458	457	463	478	531	513	490	478	499	492	481	455	426	376	456	1936
2	327	406	435	442	449	458	458	467	463	466	475	477	491	483	473	489	513	513	497	484	470	469	465	466	464	2136
3	467	470	471	471	471	471	470	469	469	470	470	468	472	474	478	483	486	490	478	470	466	466	458	455	471	2313
4	462	466	467	465	465	463	463	465	466	466	465	466	467	474	476	477	483	482	481	477	470	467	466	466	469	2265
5 *q*	461	461	463	470	471	472	472	470	467	463	458	457	454	455	462	470	471	472	473	467	465	465	465	465	465	2169
6	465	463	463	461	450	458	463	465	463	460	456	450	449	451	458	466	469	469	470	472	469	470	467	466	462	2093
7	465	465	466	467	469	469	470	470	467	464	457	452	446	447	453	468	482	508	500	482	478	476	471	471	469	2263
8	468	466	468	471	472	474	475	473	469	466	462	458	457	467	475	480	502	513	501	490	470	466	467	454	473	2364
9	442	443	447	419	430	455	462	463	464	463	465	466	466	472	467	467	469	470	471	478	486	475	470	462	461	2072
10 *q*	441	446	448	449	458	468	470	470	470	466	465	461	457	456	458	460	462	464	465	465	466	467	467	466	461	2065
11 *q*	464	464	464	464	465	466	468	468	465	462	459	457	454	452	456	461	466	470	471	473	472	470	469	466	464	2146
12 *q*	466	466	466	466	466	467	468	467	466	465	466	463	458	459	460	459	460	460	459	461	466	470	469	467	464	2140
13	465	464	465	466	458	439	425	433	447	452	446	461	461	462	472	502	603	607	553	531	522	501	474	423	*481*	2532
14	426	451	466	469	469	470	474	478	474	476	476	477	485	501	499	506	486	490	488	481	462	422	455	447	472	2328
15	412	413	427	442	445	452	461	458	464	467	466	465	465	465	466	468	470	468	468	469	467	465	471	468	458	1982
16	446	437	410	416	454	461	461	460	461	466	466	465	465	468	472	476	486	486	478	473	470	466	458	460	461	2061
17	464	467	469	468	464	468	468	467	464	462	461	459	458	461	464	470	481	489	482	472	470	466	466	467	468	2227
18	467	469	469	469	469	469	465	466	462	460	459	457	452	451	457	468	474	480	492	468	457	454	444	420	462	2098
19	394	381	407	446	459	460	460	460	467	463	463	460	460	480	487	478	479	476	487	486	481	495	480	467	461	2076
20 *d*	473	451	456	441	442	453	460	467	460	456	464	475	505	502	536	544	534	512	498	482	462	450	442	344	471	2309
21 *d*	244	144	70	164	198	286	366	361	390	451	475	490	508	521	554	546	557	525	519	482	410	419	406	383	*395*	469
22	382	441	458	462	461	470	480	483	484	481	479	477	475	474	476	482	480	492	500	494	483	478	474	473	472	2339
23 *q*	474	474	475	477	478	479	480	480	478	474	468	464	466	470	471	474	476	476	477	477	475	474	471	471	474	2379
24	472	472	470	472	472	473	476	476	475	474	470	468	470	471	479	485	498	496	487	481	476	444	449	450	473	2356
25	440	454	462	466	471	472	474	474	474	476	472	467	463	462	464	470	476	476	474	480	488	482	465	467	470	2269
26	470	470	470	471	472	472	474	474	475	472	472	468	465	464	465	467	470	469	469	474	474	475	470	465	470	2287
27	466	466	470	470	470	469	470	470	470	473	470	466	463	466	475	475	477	486	481	477	477	475	472	471	472	2325
28 *d*	471	464	454	434	422	407	413	435	451	466	476	504	487	484	500	515	535	580	606	576	490	434	326	360	470	2290
29 *d*	259	282	282	351	409	412	430	463	462	490	509	506	504	506	525	569	584	575	564	512	403	344	309	299	440	1549
30 *d*	299	272	292	322	382	422	439	462	468	481	507	511	529	535	526	510	539	519	502	486	478	478	475	453	454	1887
Mean	*429*	431	432	439	446	453	458	461	463	467	469	469	471	474	481	487	495	*496*	493	484	470	461	452	442	464	
Sum 12,000γ+	883	932	964	1166	1385	1581	1747	1846	1898	2009	2055	2072	2115	2211	2435	2598	2858	2891	2790	2512	2104	1838	1567	1268		Grand Total 333,725

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — SEPTEMBER 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1	3331 3333	22	2231 3333	20	3321 3233	20	2220 4325	20	1	16
2	3223 2321	18	2223 2310	15	3222 1321	16	5211 2320	16	1	17
3	1012 2212	11	1002 1202	8	0011 2212	9	0000 0001	1	1	17
4	1211 2220	11	0111 2210	8	1211 1120	9	1100 0000	2	0	17
5 *q*	1111 0010	5	1101 0000	3	1010 0010	3	1000 0000	1	0	15
6	1100 0111	5	1100 0111	5	1100 0010	3	0100 0000	1	0	15
7	0010 3411	10	0010 3411	10	0010 1210	5	0000 0330	6	1	15
8	1002 2333	14	1002 2332	13	0000 2133	9	0000 1222	7	1	15
9	3311 2032	15	3311 2021	13	3311 1032	14	2301 1022	11	1	15
10 *q*	2100 1000	4	1100 1000	3	2100 0000	3	1100 0000	2	0	15
11 *q*	0001 1100	3	0001 1100	3	0000 0000	0	0000 0000	0	0	16
12 *q*	0001 2111	6	0001 2110	5	0000 1001	2	0000 0000	0	0	16
13	1333 2543	24	1333 2543	24	0333 2333	20	0332 1534	21	1	16
14	2121 2233	16	2121 2233	16	2121 2133	15	3000 2233	13	1	13
15	2231 0132	14	2231 0132	14	2221 0031	11	2210 0022	9	1	16
16	3211 2211	13	3211 2211	13	3211 1211	12	3300 0101	8	1	16
17	1110 1111	7	1100 1111	6	1110 1110	6	1000 0110	3	0	16
18	0002 3243	14	0002 3232	12	0001 2243	12	0000 1133	8	1	16
19	4221 2232	18	3221 2232	17	4121 2132	16	3200 2122	12	1	16
20 *d*	3333 4436	29	2133 4436	26	3332 3334	24	2213 3335	22	2	16
21 *d*	6744 4645	40	6744 4645	40	5643 3544	34	6643 3444	34	2	16
22	5211 2320	16	5200 2320	14	3211 1110	10	4100 0110	7	1	16
23 *q*	0011 2000	4	0011 2000	4	0011 1000	3	0000 0000	0	0	16
24	0002 1223	10	0002 1223	10	0001 1213	8	0000 0112	4	1	16
25	2001 1123	10	1000 0112	5	2001 1023	9	2000 0012	5	0	16
26	1010 0122	7	0010 0122	6	1000 0022	5	0000 0021	3	0	16
27	2101 1101	7	1000 1100	3	2101 1101	7	0000 0000	0	0	16
28 *d*	1333 4665	31	1333 4665	31	0332 2354	22	1333 1555	26	2	16
29 *d*	6443 3465	35	6443 3465	35	5433 3345	30	5433 3365	32	2	16
30 *d*	5333 4412	25	5333 4412	25	4322 2412	20	3422 2312	19	1	16
								Mean	0·77	16

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 16,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	696	674	653	686	689	693	687	674	667	657	650	655	660	674	690	687	687	690	692	699	697	699	698	697	681	351
2	698	695	693	696	695	696	694	695	680	666	663	666	677	683	683	688	688	693	703	701	696	694	700	699	689	542
3	700	699	700	700	699	700	699	696	687	681	676	671	678	685	686	679	693	696	703	709	693	691	694	698	692	613
4	698	697	697	702	700	696	694	690	680	671	661	662	669	680	687	692	694	696	702	706	706	707	700	697	691	584
5	699	700	700	700	700	700	694	693	686	682	685	680	683	680	691	690	693	690	692	701	702	701	702	702	694	646
6	703	704	704	700	703	702	700	697	690	680	671	664	663	677	681	690	700	700	703	703	706	707	705	706	694	659
7	709	706	713	700	704	704	704	704	697	677	665	664	676	687	680	696	693	702	709	710	705	700	699	699	696	703
8	701	700	699	699	703	706	707	703	693	681	676	683	709	700	683	681	683	697	707	706	693	713	706	704	697	733
9 *d*	705	700	697	710	712	710	711	706	699	681	667	663	671	678	680	691	704	706	698	696	632	640	594	469	676	220
10 *d*	449	503	570	645	682	696	690	690	687	684	683	683	663	711	757	721	698	696	689	692	703	677	711	687	*669*	67
11	683	689	688	688	691	692	690	689	678	669	666	662	668	678	691	711	682	686	692	701	690	699	699	700	687	482
12 *d*	695	650	661	689	691	690	688	682	681	656	662	665	668	677	682	705	692	683	696	698	701	698	698	695	683	403
13	670	632	679	686	692	695	692	685	676	669	668	670	674	677	673	688	692	695	698	701	699	709	710	700	685	430
14	698	697	695	699	701	705	699	686	672	669	669	673	672	685	686	690	698	698	702	703	706	702	696	698	692	599
15	681	652	695	689	694	696	697	693	686	679	677	679	682	686	689	693	701	707	708	709	706	705	702	702	692	608
16	699	706	700	699	699	702	703	701	690	679	670	671	673	678	686	694	699	701	704	706	711	712	706	705	696	694
17	705	703	704	699	703	699	702	701	680	672	665	669	678	694	684	694	702	705	709	705	698	709	720	704	696	704
18	699	698	701	703	703	706	696	683	675	666	659	660	670	677	686	692	698	703	705	706	705	704	718	708	693	621
19	699	698	700	702	703	705	706	702	692	675	664	660	667	681	689	692	701	705	707	706	705	702	701	702	694	664
20 *q*	702	709	704	701	702	705	706	703	692	682	669	670	678	686	693	699	702	707	709	707	703	703	706	706	698	744
21 *q*	704	703	701	702	704	703	701	696	685	669	661	662	668	681	689	698	701	702	704	706	705	706	705	704	694	660
22	704	704	704	706	708	709	710	706	698	686	677	677	682	688	701	701	710	710	714	708	703	706	711	714	*702*	837
23	708	702	708	710	710	708	704	689	684	674	664	668	660	671	675	688	695	701	694	687	699	704	711	705	692	619
24 *q*	703	704	703	703	703	705	703	695	685	672	673	672	675	678	675	685	695	699	701	700	701	702	704	703	693	639
25 *q*	702	704	701	701	703	703	697	694	688	678	668	668	674	681	687	692	698	699	703	703	704	705	704	708	694	665
26 *q*	708	705	704	704	705	705	704	700	692	684	674	670	673	678	687	692	699	702	706	709	711	715	715	714	698	756
27	714	715	715	715	714	713	712	709	693	672	677	677	678	685	681	675	691	685	698	697	688	698	706	702	696	710
28 *d*	701	712	695	699	697	704	695	690	676	666	630	634	654	675	687	698	681	693	702	709	717	721	702	692	689	530
29 *d*	694	690	685	693	701	702	700	694	678	665	656	635	655	659	686	714	696	696	707	706	701	704	701	701	688	519
30	697	702	689	693	697	705	694	691	676	669	659	659	664	670	678	682	688	694	697	698	695	697	697	699	687	490
31	698	696	697	699	698	698	697	692	681	672	668	668	675	685	696	697	703	705	708	708	707	705	704	704	694	661
Mean	691	689	692	697	700	702	699	695	685	674	667	*667*	672	681	688	693	695	698	702	*703*	700	701	701	694	691	
Sum 20,000γ+	1422	1349	1455	1618	1706	1753	1676	1529	1224	883	673	660	837	1125	1319	1495	1557	1642	1762	1796	1688	1735	1725	1524		Grand Total 514,153

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 200·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	12·2	7·4	9·2	11·3	10·9	10·9	10·5	9·3	11·3	12·3	14·2	18·3	20·3	19·8	18·3	17·1	15·8	14·8	13·6	11·2	12·9	14·3	14·2	14·3	13·5	124·4
2	13·0	13·0	14·2	13·2	11·7	11·6	10·6	9·8	10·3	13·1	15·0	18·3	21·3	21·5	20·5	17·9	16·4	15·3	13·4	7·2	10·1	13·3	14·0	13·8	14·1	138·5
3	13·8	13·1	12·7	12·3	12·3	12·0	12·4	11·4	10·5	11·6	14·2	18·3	21·8	24·2	23·1	19·2	17·0	15·6	15·7	15·4	10·6	12·4	11·3	9·6	14·6	150·5
4	11·1	12·9	12·6	12·1	11·7	11·6	11·7	11·0	11·1	11·5	13·4	15·7	17·8	18·1	17·6	16·9	15·9	15·4	15·3	14·8	14·6	15·1	10·5	12·9	13·8	131·3
5	10·7	10·6	10·5	10·2	12·4	10·5	10·7	9·8	11·9	12·7	12·9	14·7	18·6	17·9	19·2	17·8	14·2	12·7	11·5	14·3	13·1	12·3	13·0	12·5	13·1	114·7
6	13·1	14·2	12·5	13·9	15·3	12·0	11·5	10·2	10·0	9·9	13·1	16·7	20·4	21·0	20·4	18·1	16·7	15·9	14·5	14·1	13·6	13·8	13·0	12·2	14·4	146·1
7	8·5	8·2	7·3	11·1	12·3	12·2	11·3	10·2	10·3	12·8	16·1	15·2	22·3	23·2	19·7	18·5	15·7	15·0	15·3	15·4	14·3	12·1	12·8	12·9	13·9	132·7
8	12·7	12·7	12·6	12·6	12·4	12·2	11·6	10·5	10·3	11·7	15·2	18·0	24·7	26·3	26·3	23·5	18·4	16·7	15·9	12·0	10·9	9·9	9·0	12·7	14·9	158·8
9 *d*	12·9	10·9	14·0	10·4	11·4	11·5	11·6	11·4	11·1	13·4	16·3	17·7	19·3	19·8	17·9	16·5	14·8	12·5	12·2	8·3	6·9	2·6	−4·5	1·3	11·7	80·2
10 *d*	−20·9	−7·6	−1·2	6·0	7·8	10·0	9·7	8·3	9·0	8·5	13·0	18·7	19·7	21·0	15·5	22·2	15·5	10·8	6·0	11·9	11·3	14·9	3·4	8·8	*9·3*	22·3
11	12·0	12·7	12·2	11·5	11·6	11·3	10·8	9·7	9·6	10·8	15·5	17·8	20·8	20·3	22·0	14·0	16·3	15·8	14·5	15·3	13·1	13·4	13·4	13·4	14·1	137·8
12 *d*	8·6	15·1	7·0	10·8	8·8	14·5	15·9	9·5	8·8	9·4	11·7	15·6	17·2	17·9	17·9	18·3	17·5	14·3	15·0	14·1	14·3	12·3	13·3	9·2	13·2	117·0
13	−5·6	−2·3	4·2	10·0	11·8	11·7	12·3	11·8	11·7	12·5	14·5	17·1	18·5	19·7	17·7	17·0	15·5	13·0	14·4	14·2	13·4	11·9	12·8	13·1	12·1	90·9
14	12·7	12·8	12·6	12·3	11·7	10·8	10·7	10·4	10·7	12·5	13·7	17·7	17·1	20·6	20·0	17·4	17·1	12·2	15·2	15·5	1·1	5·1	8·9	7·7	12·8	106·5
15	9·0	11·7	5·7	9·7	10·0	10·7	10·8	10·4	10·2	11·7	14·3	16·1	16·8	17·4	17·8	17·6	17·3	17·1	16·2	15·3	14·3	13·3	12·4	11·6	13·2	117·4
16	8·0	9·7	11·1	12·4	11·6	11·6	11·5	11·0	10·5	11·5	13·4	16·2	18·3	18·9	18·3	17·3	15·7	14·3	14·0	14·3	9·9	11·0	13·4	13·3	13·2	117·2
17	14·4	14·2	13·5	14·6	13·3	13·3	17·6	15·3	13·3	14·0	16·7	17·3	20·2	24·1	21·9	19·1	17·8	16·2	16·2	13·0	13·0	8·7	10·8	11·0	15·4	169·5
18	12·4	12·1	11·7	11·6	12·5	11·7	11·5	11·2	10·6	11·1	14·4	17·0	17·9	18·7	18·4	16·5	15·0	15·0	14·6	14·5	14·3	13·6	5·7	10·4	13·4	122·4
19	12·4	13·2	12·9	12·7	14·5	12·4	11·6	10·2	9·1	9·8	13·0	16·0	18·7	20·0	19·0	17·4	15·7	15·8	15·4	14·8	13·4	12·0	12·8	12·8	14·0	135·6
20 *q*	12·5	12·5	12·2	11·9	12·1	12·4	11·7	10·8	9·7	11·5	14·1	18·1	21·1	20·7	19·1	17·1	16·5	15·9	15·2	15·3	14·4	14·3	13·6	13·6	14·4	146·3
21 *q*	13·6	13·3	13·2	13·2	12·7	12·5	11·8	10·5	9·4	10·4	13·6	16·9	18·7	18·8	17·3	16·1	15·2	14·6	14·5	14·1	13·7	13·4	13·4	13·2	13·9	134·1
22	13·2	13·2	13·1	12·7	12·8	12·5	11·9	10·5	9·1	9·8	12·9	16·2	18·3	18·7	19·7	17·9	17·8	17·0	17·6	17·3	14·3	11·9	14·1	14·3	14·5	146·8
23	12·8	12·7	12·8	10·4	9·9	11·1	10·7	10·5	10·8	10·9	13·3	18·1	18·9	19·6	19·2	17·9	16·5	15·8	15·9	9·1	12·5	13·0	11·2	11·3	13·5	124·9
24 *q*	12·9	13·4	13·6	13·4	12·6	13·0	11·6	10·2	10·4	13·6	18·0	20·7	22·3	22·3	21·6	20·9	16·7	15·3	13·0	14·0	13·6	13·3	12·1	11·7	15·0	160·2
25 *q*	12·6	13·3	12·8	12·4	12·0	11·9	12·0	11·2	11·5	12·6	14·6	17·3	18·5	18·7	18·3	16·9	15·7	14·2	14·3	14·3	13·2	11·7	12·3	12·6	14·0	134·9
26 *q*	13·1	13·1	13·1	13·3	13·3	11·9	11·8	10·9	10·4	10·4	12·5	15·3	17·9	18·9	19·0	17·7	16·9	16·0	15·1	15·4	15·4	15·2	14·9	13·9	14·4	145·4
27	13·9	13·3	13·0	12·5	12·6	12·2	11·9	10·2	10·4	14·0	14·3	17·3	21·0	22·3	24·6	21·8	20·2	13·9	15·7	15·1	8·2	10·8	12·7	12·4	14·8	154·3
28 *d*	12·5	11·1	10·2	10·9	12·0	13·5	15·3	15·7	14·1	10·4	19·5	18·6	22·9	25·6	23·5	21·3	22·5	20·0	19·7	16·3	14·8	−4·3	12·5	10·7	15·4	169·3
29 *d*	12·0	10·5	9·2	12·4	12·7	12·1	11·2	9·9	9·5	10·2	14·0	18·3	22·6	27·1	26·3	25·9	23·4	20·8	20·0	13·1	13·4	12·3	13·0	14·7	*15·6*	174·6
30	13·7	12·2	12·4	15·7	9·3	7·2	9·5	9·9	9·0	9·8	13·1	16·6	17·7	17·5	16·2	14·8	13·3	13·4	13·6	13·4	13·2	13·0	13·3	14·0	13·0	111·8
31	13·6	13·6	13·5	13·2	13·0	12·5	11·7	10·5	9·5	10·3	12·4	14·3	16·2	16·7	17·3	15·9	15·9	16·0	16·1	15·7	15·2	14·3	13·5	13·4	13·9	134·3
Mean	10·6	11·2	11·1	12·0	11·9	11·8	11·8	10·7	*10·5*	11·4	14·3	17·1	19·6	*20·6*	19·8	18·3	16·7	15·2	14·8	13·8	12·5	11·6	11·5	11·9	13·8	
Sum 300·0′+	27·4	46·8	44·4	70·7	69·0	65·4	65·4	32·3	24·1	·54·7	142·9	230·1	307·6	337·3	313·6	266·5	218·9	171·3	159·6	128·7	87·0	60·9	56·8	69·3		Grand Total 10250·7

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	437	418	418	436	461	465	469	477	478	476	477	477	477	478	482	484	487	480	482	479	476	475	476	477	468	242
2	477	479	475	472	473	472	473	475	473	471	470	470	472	476	486	494	498	494	490	491	475	477	474	476	478	483
3	475	477	477	475	475	473	470	468	468	470	471	471	472	475	482	483	482	479	475	475	496	499	486	480	477	454
4	482	482	483	481	480	480	477	477	475	474	469	466	465	467	470	475	476	475	475	472	472	471	477	475	475	396
5	478	480	478	479	469	467	470	470	468	465	464	464	466	470	475	488	499	506	507	491	483	480	475	474	478	466
6	473	468	461	457	452	464	470	473	470	470	468	468	472	477	481	482	481	479	479	477	474	472	471	469	471	308
7	459	463	459	467	471	473	477	475	474	476	475	469	468	474	480	486	487	482	481	481	484	487	482	477	475	407
8	476	475	475	477	476	477	476	477	475	468	465	458	457	474	490	493	495	489	484	495	499	480	468	470	478	469
9 *d*	473	476	467	460	469	473	474	475	474	477	474	473	472	473	479	478	477	489	526	564	452	436	367	178	461	56
10 *d*	236	265	297	374	459	481	489	489	483	481	475	481	507	535	581	551	565	545	521	500	464	395	432	454	461	60
11	461	469	477	477	475	476	477	482	482	483	479	479	478	483	493	538	507	486	482	483	489	482	482	478	483	598
12 *d*	468	416	358	405	423	419	427	452	467	477	475	477	476	473	475	477	480	485	488	480	478	482	482	476	*459*	16
13	417	358	424	448	461	466	473	477	480	477	478	477	481	483	483	481	484	485	483	480	481	468	459	450	465	154
14	463	471	473	473	472	472	473	477	482	480	478	475	482	481	484	489	490	491	482	483	485	473	465	470	478	464
15	465	399	414	457	468	470	472	473	473	470	470	472	473	473	473	473	471	469	468	470	471	474	477	477	465	172
16	474	460	460	469	473	471	472	473	473	472	472	472	470	472	472	473	475	475	474	472	469	465	464	467	470	289
17	468	469	470	470	462	463	456	456	464	462	464	465	469	473	485	485	480	477	475	489	505	488	460	458	471	313
18	469	473	473	473	473	471	474	476	475	474	473	473	474	475	478	479	478	475	475	473	474	474	466	453	473	351
19	462	469	470	471	469	471	473	474	476	475	471	470	469	472	476	483	483	476	476	475	476	479	478	477	474	371
20 *q*	475	470	465	472	474	475	474	475	476	471	469	467	466	469	470	472	473	472	474	475	476	476	473	472	472	331
21 *q*	472	473	474	474	475	475	475	477	478	477	475	472	474	475	475	474	475	474	474	474	473	472	471	471	474	379
22	471	472	473	474	474	473	474	475	477	475	474	473	470	469	471	473	472	473	474	487	494	488	481	473	475	410
23	472	469	426	444	458	465	469	475	475	474	473	471	477	476	476	479	481	484	497	503	486	477	471	468	473	346
24 *q*	469	471	472	472	473	472	473	478	478	476	472	468	469	476	484	485	485	484	484	480	479	477	474	472	476	423
25 *q*	471	468	471	472	474	474	475	476	474	471	469	466	468	470	471	474	476	477	475	475	475	474	473	469	472	338
26 *q*	467	469	470	470	469	470	471	474	475	472	467	467	467	468	469	472	469	470	472	471	471	470	471	469	470	280
27	466	463	464	466	467	467	468	472	478	479	475	475	475	483	489	493	504	518	494	497	505	490	474	474	481	536
28 *d*	468	452	463	466	468	464	461	465	469	475	491	494	488	483	499	496	499	490	490	501	515	526	501	484	484	608
29 *d*	478	475	467	466	470	474	476	480	486	486	484	488	490	491	483	579	532	515	522	536	503	497	489	480	*494*	847
30	475	463	460	442	456	449	458	472	482	490	492	495	497	498	499	495	490	485	481	479	479	479	479	479	478	474
31	480	481	481	480	479	477	478	481	485	484	483	480	480	482	478	478	476	476	474	475	478	479	479	479	479	503
Mean	461	*455*	455	462	468	469	471	474	476	475	474	473	475	478	483	*489*	488	486	485	487	482	476	470	462	474	
Sum 14,000γ+	277	93	95	319	498	539	594	696	743	728	692	673	721	824	989	1162	1127	1055	1034	1083	937	762	577	326		Grand Total 352,544

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — OCTOBER 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magnetograph house °C
1	3211 2110	11	3211 2110	11	3111 1010	8	3200 0100	6	1	16
2	1000 0031	5	1000 0021	4	1000 0030	4	0000 0010	1	1	16
3	0011 1122	8	0011 1122	8	0011 1021	6	0000 0122	5	0	16
4	1000 0002	3	0000 0001	1	1000 0002	3	0000 0001	1	0	15
5	1111 2220	10	0001 2210	6	1111 2220	10	0100 0120	4	1	15
6	1211 1101	8	0110 1001	4	1211 0100	6	1100 0001	3	0	15
7	2110 2111	9	2010 2110	7	1100 1011	5	1000 0000	1	1	15
8	0002 3233	13	0002 3222	11	0001 2233	11	0000 2122	7	1	15
9 *d*	2102 1256	19	2002 0256	17	1101 1054	13	1100 0156	14	2	15
10 *d*	6422 5445	32	6421 5334	28	5322 3445	28	5511 4244	26	2	15
11	2011 2321	12	1011 2320	10	2011 2211	10	2000 3310	9	1	15
12 *d*	4332 0314	20	4212 0312	15	4331 0104	16	4331 0211	15	1	15
13	4202 1112	13	4101 1112	11	3202 1112	12	4200 0002	8	1	15
14	0112 1344	16	0111 1222	10	0112 1344	16	1000 0111	4	1	15
15	4110 0101	8	4010 0101	7	3110 0000	5	4200 0000	6	1	15
16	1101 0122	8	1100 0112	6	1101 0022	7	2000 0001	3	1	15
17	0121 2123	12	0121 2123	12	0121 2023	11	0110 1123	9	1	14
18	1112 1003	9	0111 0002	5	1112 1003	9	1000 0002	3	1	15
19	1100 1111	6	0000 1111	4	1100 1111	6	1000 0000	1	0	15
20 *q*	1001 1010	4	1000 1010	3	1001 1000	3	1000 0000	1	0	15
21 *q*	0000 0000	0	0000 0000	0	0000 0000	0	0000 0000	0	0	15
22	0001 1122	7	0001 1121	6	0000 1022	5	0000 0011	2	1	15
23	3111 1131	12	1111 1011	7	3101 0131	10	3210 0020	8	1	15
24 *q*	0001 1111	5	0001 1101	4	0000 0111	3	0000 0000	0	0	15
25 *q*	1000 0110	3	0000 0100	1	1000 0010	2	0000 0000	0	0	15
26 *q*	0000 0000	0	0000 0000	0	0000 0000	0	0000 0000	0	0	15
27	1012 2332	14	0002 2221	9	1011 2332	13	0000 0221	5	1	15
28 *d*	2123 2345	22	2122 2333	18	2123 2245	21	2112 1133	14	1	15
29 *d*	2222 4422	20	2212 4321	17	2121 4422	18	1001 2430	11	1	15
30	2331 0110	11	2321 0110	10	2331 0000	9	0210 0000	3	1	15
31	0001 2010	4	0001 2010	4	0001 2010	4	0000 1000	1	0	15
								Mean	0·74	15

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — NOVEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 16,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	700	699	700	700	703	704	703	699	691	681	674	677	685	693	697	702	707	711	703	698	701	701	701	699	697	729
2	700	699	710	704	701	705	706	700	686	680	674	670	671	684	683	691	701	698	696	704	674	670	675	680	690	562
3 *d*	680	687	688	689	693	695	697	689	682	671	673	675	680	693	692	673	706	713	699	669	667	675	684	690	686	460
4	684	669	678	680	692	700	695	693	686	674	663	659	659	673	680	696	700	703	703	703	700	700	697	695	687	482
5	695	684	689	692	700	710	703	703	696	683	676	672	676	680	689	687	684	694	692	703	683	684	686	686	689	547
6	690	694	695	698	697	701	703	698	693	686	679	677	677	681	688	697	701	704	703	704	703	707	703	701	695	680
7 *q*	701	702	703	705	706	704	707	708	706	699	696	693	693	698	698	700	704	710	710	709	710	708	708	706	703	884
8 *d*	706	686	650	695	699	702	704	700	696	692	691	684	686	692	699	704	696	699	710	710	660	624	666	694	689	545
9	696	687	687	686	686	690	690	691	688	685	677	671	679	677	673	684	684	697	711	690	696	698	697	697	688	517
10	693	692	693	694	696	699	700	698	693	686	681	679	677	681	690	693	699	700	698	700	697	698	700	700	693	637
11	700	697	696	697	698	706	703	700	699	687	683	681	684	691	698	705	707	713	717	717	749	702	664	691	699	785
12 *d*	692	691	694	691	693	689	681	701	693	675	674	673	677	687	693	698	688	692	676	674	650	686	699	700	686	467
13 *d*	700	691	690	683	697	694	696	694	684	680	674	678	683	687	689	693	699	687	701	694	694	697	716	689	691	590
14	691	678	690	696	701	701	689	700	698	691	687	677	686	693	698	693	696	693	696	703	706	699	700	701	694	663
15	700	698	697	699	700	701	700	700	697	693	687	683	681	675	654	699	694	689	690	687	693	697	696	682	691	592
16	690	690	693	692	685	699	703	700	693	684	680	680	680	683	696	700	698	704	707	703	700	704	703	701	695	668
17 *q*	697	697	697	699	700	702	703	699	696	687	683	683	686	692	696	698	702	704	705	704	704	703	703	703	698	743
18 *q*	703	697	696	699	701	706	705	704	700	694	688	687	690	696	700	703	704	703	705	706	705	706	705	703	700	806
19 *q*	703	703	704	703	706	703	706	706	700	693	688	687	691	698	702	704	704	700	707	710	710	706	705	704	702	843
20 *q*	701	703	703	705	706	707	709	706	701	693	689	690	692	696	700	702	704	708	710	711	710	709	708	707	703	870
21	706	705	706	708	710	714	713	711	707	697	690	690	693	700	707	713	719	719	717	714	710	720	705	694	*707*	968
22	698	704	707	704	707	723	717	685	687	684	681	679	683	670	687	695	700	706	706	700	700	704	703	701	697	731
23	700	700	701	704	707	707	707	706	701	689	684	682	687	690	686	689	698	700	707	712	705	704	704	709	699	779
24 *d*	684	677	696	702	708	692	698	705	700	683	665	674	679	677	691	697	698	695	691	687	686	670	680	671	688	506
25	642	680	690	691	693	694	697	697	698	695	688	674	673	675	689	686	682	682	687	681	675	679	690	693	*685*	431
26	687	681	694	694	697	703	705	703	694	685	681	680	686	690	679	689	693	697	695	692	689	697	702	703	692	616
27	706	706	704	704	699	713	710	713	705	700	696	694	697	696	697	700	699	700	690	678	680	680	678	667	696	712
28	669	686	689	687	704	704	689	692	691	687	677	681	688	688	691	699	702	716	703	690	689	681	671	674	689	548
29	674	690	696	694	697	706	708	712	703	667	680	691	686	687	689	693	693	689	694	700	701	703	701	706	694	660
30	706	702	701	700	705	714	709	697	707	699	689	682	683	687	691	691	699	705	709	687	654	683	647	679	693	626
Mean	693	693	695	697	700	*703*	702	700	696	687	682	*680*	683	687	691	696	699	701	701	698	693	693	693	694	694	
Sum 20,000γ+	794	775	837	895	987	1088	1056	1010	871	600	448	403	488	610	722	874	961	1031	1038	940	801	795	797	826		Grand Total 499,647

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — NOVEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 200·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	13·5	13·3	13·1	13·1	12·8	12·2	11·8	11·5	11·1	12·5	14·6	17·2	18·9	18·9	17·5	16·5	16·5	16·8	17·3	16·6	11·1	9·3	11·4	12·0	14·1	139·5
2	11·1	11·9	9·8	8·8	10·1	8·8	9·6	10·5	10·5	13·6	15·8	18·7	21·0	22·0	20·5	19·7	19·6	18·6	16·0	15·8	6·7	4·1	6·7	4·3	13·1	114·2
3 *d*	8·4	7·8	9·3	13·1	12·7	12·1	10·6	11·0	10·4	11·7	14·9	17·0	16·5	20·0	19·9	17·2	19·8	13·7	6·9	8·4	0·5	3·6	7·5	9·5	*11·8*	82·5
4	12·1	16·0	7·9	8·5	11·4	9·5	11·0	10·5	11·0	11·0	12·1	15·2	16·6	18·4	17·3	18·0	16·7	16·6	15·5	14·7	13·7	13·4	11·7	9·1	13·2	117·9
5	7·8	11·2	13·5	13·0	11·8	9·6	13·1	17·5	14·9	13·2	15·1	14·6	16·1	16·0	18·2	15·9	12·8	15·1	13·9	6·9	7·2	8·8	7·8	8·8	12·6	102·8
6	13·5	14·3	13·9	13·4	13·1	12·7	12·2	11·9	10·8	11·3	13·4	15·8	17·2	17·5	16·5	15·2	14·5	14·4	14·4	13·1	13·9	11·3	12·9	13·1	13·8	130·3
7 *q*	13·4	13·4	13·5	13·5	13·1	12·6	12·7	12·7	12·0	11·9	14·8	16·3	17·5	18·2	17·1	16·2	15·8	16·4	15·4	15·1	14·5	13·9	13·7	13·4	14·5	147·1
8 *d*	11·8	12·0	12·0	7·0	11·6	11·6	11·8	12·2	11·9	12·5	14·7	15·0	16·2	18·1	19·4	21·9	18·5	14·6	16·3	1·3	1·6	2·1	7·6	11·4	12·2	93·1
9	14·6	13·2	11·9	11·7	12·2	11·7	11·4	10·6	10·6	12·3	12·8	14·8	17·9	18·4	17·7	16·8	16·1	13·4	5·2	11·7	13·4	12·5	12·3	12·7	13·2	115·9
10	12·4	12·3	11·9	12·0	12·7	12·7	12·6	12·2	11·8	11·8	13·4	16·2	16·8	17·5	16·2	15·1	15·7	15·1	14·0	14·7	13·7	13·9	13·6	12·5	13·8	130·8
11	11·8	12·9	12·3	11·5	12·6	12·1	11·7	11·9	11·0	11·0	12·9	15·3	13·9	17·5	17·2	16·9	17·0	16·9	16·2	17·1	9·1	−1·5	2·3	9·9	12·5	99·5
12 *d*	10·8	12·3	12·6	10·6	10·5	11·6	14·7	11·9	14·3	12·8	14·6	15·6	17·1	18·1	18·4	18·0	12·4	11·5	11·4	12·3	4·0	8·1	9·7	11·6	12·7	104·9
13 *d*	10·1	11·6	10·3	16·1	10·1	10·5	11·1	11·5	11·5	11·1	12·6	15·5	16·0	16·8	16·0	15·8	14·4	11·1	3·3	6·1	11·8	11·4	13·4	11·4	12·1	89·5
14	8·3	10·9	14·0	13·3	12·7	12·5	13·8	13·2	10·9	11·2	14·2	14·9	16·5	17·9	17·9	15·6	12·1	12·1	15·4	14·4	13·0	12·6	12·1	11·2	13·4	120·7
15	12·8	13·1	13·6	13·1	13·2	12·6	12·6	12·2	11·4	11·3	13·4	15·2	17·5	18·0	16·2	18·4	18·4	12·5	20·5	12·8	11·4	11·6	8·8	6·8	13·6	127·4
16	9·1	11·8	12·0	13·1	15·3	13·4	12·5	11·8	12·4	11·3	13·4	15·8	16·6	17·1	16·7	17·1	14·5	15·9	16·0	15·1	13·5	13·3	12·0	12·7	13·9	132·4
17 *q*	12·4	13·2	12·6	12·7	13·1	12·8	12·7	12·5	11·8	11·8	13·3	15·3	16·2	16·0	15·6	15·1	14·6	14·2	13·6	13·4	13·5	13·3	13·2	11·5	13·5	124·4
18 *q*	11·6	11·8	12·8	12·8	13·0	12·4	12·5	11·5	10·9	10·9	13·1	14·7	15·8	16·7	17·0	16·1	15·3	14·4	14·7	14·4	13·6	12·5	12·7	12·4	13·5	123·6
19 *q*	11·8	11·8	11·8	12·5	11·8	12·8	12·6	11·9	11·5	11·4	13·1	14·5	16·1	17·1	16·7	15·8	15·6	14·4	14·4	13·8	13·4	13·0	12·8	12·8	13·5	123·4
20 *q*	12·3	10·5	11·7	12·1	13·0	13·1	12·4	11·9	11·3	11·3	13·2	15·4	16·0	15·9	16·2	15·9	15·5	15·3	14·5	14·0	13·4	13·1	13·0	12·9	13·5	123·9
21	13·1	13·4	13·6	14·0	14·1	13·7	13·3	12·5	11·8	12·0	13·5	16·0	17·2	17·4	17·5	17·4	16·8	16·6	16·1	15·4	15·1	13·9	2·6	5·5	13·9	132·5
22	11·9	12·9	12·3	12·4	14·3	14·1	11·7	13·6	18·7	16·3	15·0	15·8	19·5	17·9	18·2	16·6	16·2	15·5	15·4	14·2	10·7	11·1	12·1	12·5	*14·5*	148·9
23	13·1	13·2	13·5	14·4	13·6	13·4	12·7	12·5	11·8	12·6	13·2	14·4	18·1	20·5	17·8	16·8	15·3	14·2	12·6	13·1	12·8	11·7	11·5	3·8	13·6	126·6
24 *d*	−1·2	13·5	8·1	12·1	12·3	16·4	27·9	20·5	15·4	14·3	15·5	18·1	19·7	18·8	16·0	17·2	16·4	16·3	16·7	15·0	7·9	1·0	7·3	7·1	13·8	132·3
25	7·5	8·4	9·6	12·7	13·9	13·6	13·2	12·4	11·9	12·9	14·5	15·3	17·5	16·4	18·5	18·4	18·7	16·4	14·4	11·2	6·6	10·4	11·1	10·4	13·2	115·9
26	13·6	11·9	11·6	12·5	12·6	12·5	13·0	13·2	12·5	13·0	14·3	15·3	17·6	18·2	17·1	17·3	17·1	16·3	15·8	13·0	9·7	8·8	12·5	12·4	13·8	131·8
27	11·8	12·6	13·4	13·4	15·2	14·8	14·4	14·7	14·5	14·8	16·6	16·9	18·0	17·0	16·1	15·6	14·7	14·4	10·5	10·4	6·7	4·8	6·6	4·3	13·0	112·2
28	1·4	4·6	−2·8	2·5	7·9	15·2	21·6	14·7	9·0	11·6	14·8	17·1	16·6	19·0	20·7	19·9	20·7	14·5	17·9	13·5	10·5	9·1	8·0	7·0	12·3	95·0
29	4·0	10·2	11·5	12·0	13·0	13·1	12·6	13·1	13·7	16·5	19·1	18·2	17·4	14·8	16·1	16·3	17·3	14·4	12·7	13·7	12·3	10·5	11·8	11·9	13·6	126·2
30	13·2	12·5	13·5	13·5	13·3	13·3	14·5	19·8	17·8	16·1	15·8	15·8	16·7	17·7	19·7	18·4	17·1	15·2	13·5	4·0	2·6	3·3	1·1	−3·1	12·7	105·3
Mean	10·6	11·9	11·5	12·1	12·6	12·6	13·3	12·9	12·3	12·5	14·3	15·9	17·2	*17·8*	17·5	17·0	16·2	14·9	14·0	12·5	10·3	*9·5*	10·0	9·7	13·3	
Sum 200·0′+	118·0	158·5	144·8	161·4	177·0	177·4	198·3	187·9	169·1	176·0	227·7	275·9	314·7	333·8	325·9	311·1	286·1	246·8	220·5	175·2	107·9	84·9	99·8	91·8		Grand Total 9570·5

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit.) + — NOVEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	478	478	478	477	474	473	471	471	472	472	474	474	476	477	479	477	475	472	476	481	488	491	486	488	477	1458
2	484	477	467	475	475	472	471	472	474	471	471	475	479	483	490	490	490	505	517	523	455	440	471	471	479	1498
3 *d*	475	473	480	484	486	483	479	479	479	478	470	474	476	478	499	500	498	585	532	533	484	478	470	467	489	1740
4	470	446	397	429	456	470	478	481	482	483	486	486	487	490	486	483	482	481	481	481	480	479	478	468	473	1340
5	454	465	466	467	472	472	472	466	475	478	479	481	484	483	489	499	507	505	507	500	492	489	482	474	482	1558
6	468	466	475	477	480	479	479	481	481	479	477	475	476	477	478	479	479	479	480	481	479	477	475	473	477	1450
7 *q*	473	473	473	472	473	473	473	474	476	475	471	470	468	468	474	473	473	474	476	476	476	475	475	473	473	1357
8 *d*	471	452	395	421	454	466	470	473	474	474	471	472	469	468	470	481	489	493	487	529	499	469	449	478	470	1274
9	485	488	485	484	481	482	484	485	485	483	485	484	486	494	498	490	495	491	486	487	483	483	483	482	486	1669
10	481	481	479	478	479	478	477	479	482	482	481	483	483	484	484	484	480	480	481	481	485	484	485	484	481	1555
11	482	481	480	479	477	473	473	473	475	479	478	478	477	477	477	475	473	472	471	473	502	399	432	461	472	1317
12 *d*	465	467	456	463	466	463	461	470	472	475	481	481	482	482	481	486	506	501	511	442	414	474	475	481	473	1355
13 *d*	477	481	469	425	440	463	469	470	475	480	480	482	484	485	488	487	485	493	490	485	479	478	434	433	472	1332
14	450	451	464	472	473	470	473	470	473	474	475	476	476	477	481	489	492	497	490	483	479	481	480	477	476	1423
15	479	479	479	479	477	475	474	474	476	477	478	477	479	485	485	487	497	542	554	556	528	500	490	477	492	1804
16	480	480	479	479	481	477	477	477	477	479	478	479	481	486	484	486	487	484	482	484	486	483	482	482	481	1550
17 *q*	486	485	483	481	479	477	477	476	477	478	476	476	476	479	480	481	480	479	478	477	476	477	477	477	479	1488
18 *q*	476	475	478	479	479	478	477	475	475	475	474	475	476	474	476	480	482	481	480	479	479	478	478	479	477	1458
19 *q*	478	477	477	478	478	479	477	477	478	477	474	474	474	474	477	480	482	484	480	479	477	477	477	476	478	1461
20 *q*	477	477	474	475	476	476	476	476	477	475	473	473	474	474	476	479	478	478	477	477	476	474	474	474	476	1416
21	474	473	473	474	473	473	474	475	477	477	475	474	471	470	470	471	471	473	475	479	482	462	415	438	470	1269
22	456	464	466	467	464	458	461	471	465	471	473	473	479	496	490	484	481	481	483	486	486	480	477	475	474	1387
23	475	473	472	472	472	474	475	477	479	480	479	479	477	477	485	486	485	485	483	479	481	480	479	462	478	1466
24 *d*	454	427	397	433	450	457	433	440	461	476	482	483	488	493	495	491	495	514	528	544	516	493	481	449	474	1380
25	404	422	447	456	465	470	474	477	479	477	479	486	488	493	499	486	520	530	524	523	523	507	490	482	483	1601
26	459	414	445	461	467	470	473	476	481	484	481	479	478	482	490	488	488	490	496	501	497	485	478	476	477	1439
27	465	465	468	467	467	457	461	463	465	466	470	475	478	479	479	480	479	480	489	495	484	474	462	442	471	1310
28	434	405	384	375	363	376	391	415	451	462	467	473	481	482	487	493	499	504	493	536	531	522	508	466	458	998
29	416	456	466	470	472	470	470	469	471	479	468	475	486	492	490	489	491	497	495	490	488	487	486	481	477	1454
30	478	473	472	474	474	471	469	465	460	462	468	478	482	486	491	497	491	488	486	523	523	481	470	425	479	1487
Mean	467	464	461	464	467	469	469	471	474	476	476	477	479	481	484	485	488	494	493	495	488	479	473	469	477	
Sum 13,000γ+	1004	924	824	923	1023	1055	1069	1127	1224	1278	1273	1320	1371	1445	1528	1551	1630	1818	1788	1864	1628	1357	1199	1071		Grand Total 343,294

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

4 LERWICK — NOVEMBER 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1	0000 0022	4	0000 0010	1	0000 0022	4	0000 0011	2	0	15
2	2110 1142	12	2110 1142	12	2110 1142	12	1000 0253	11	1	15
3 *d*	2112 3554	23	1011 3442	16	2112 3554	23	1001 2451	14	1	15
4	3201 2102	11	2201 2101	9	3201 2102	11	3310 0001	8	1	15
5	2221 1241	15	2111 1231	12	2221 1241	15	1110 0121	7	1	15
6	2110 0011	6	1010 0001	3	2110 0011	6	1000 0000	1	0	15
7 *q*	0001 1000	2	0000 0000	0	0001 1000	2	0000 0000	0	0	14
8 *d*	3202 2344	20	3201 2244	18	2202 1343	17	4300 0234	16	1	14
9	2111 2230	12	1111 2230	11	2011 2230	11	1000 1110	4	1	14
10	0010 1011	4	0000 1001	2	0010 1011	4	0000 0000	0	0	14
11	1110 0066	15	0000 0066	12	1110 0055	13	0000 0054	9	2	14
12 *d*	2222 1353	20	2222 1353	20	2222 1353	20	1111 0251	12	1	14
13 *d*	2322 2343	21	2222 2233	18	2312 1343	19	3310 0123	13	1	14
14	2121 1311	12	2121 0211	10	2021 1311	11	2000 0110	4	1	14
15	0010 1344	13	0000 1233	9	0010 1344	13	0000 0332	8	1	14
16	1211 1111	9	1210 1111	8	1111 1101	7	0100 0000	1	0	14
17 *q*	0000 0001	1	0000 0000	0	0000 0001	1	0000 0000	0	0	14
18 *q*	0000 0000	0	0000 0000	0	0000 0000	0	0000 0000	0	0	15
19 *q*	0000 0100	1	0000 0100	1	0000 0000	0	0000 0000	0	0	15
20 *q*	1000 0000	1	0000 0000	0	1000 0000	1	0000 0000	0	0	15
21	0000 0003	3	0000 0003	3	0000 0003	3	0000 0004	4	1	15
22	2232 2121	15	0231 2110	10	2222 2021	13	1110 2000	5	1	15
23	0101 2013	8	0101 1012	6	0101 2013	8	0000 0002	2	1	15
24 *d*	4331 2233	21	3331 1222	17	4331 2133	20	3330 0233	17	1	15
25	3111 2222	14	3011 1222	12	3111 2221	13	3200 0211	9	1	15
26	2000 1122	8	2000 1111	6	2000 1122	8	3100 1001	6	1	15
27	1211 1122	11	1211 1122	11	1211 1122	11	1100 0012	5	1	14
28	2431 1333	20	2211 1322	14	2431 1333	20	3231 0334	19	1	14
29	3223 2211	16	2123 2110	12	3212 2211	14	3011 1000	6	1	14
30	1121 1143	14	0120 1143	12	1121 1143	14	0000 1133	8	1	14
								Mean	0·73	15

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

1 LERWICK (H) — 14,000γ (0·14 CGS unit) + — DECEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 16,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	672	682	688	680	683	697	707	703	686	674	669	645	684	700	685	683	683	703	706	635	690	673	569	610	675	207
2	528	507	613	671	697	703	698	692	687	683	679	678	680	667	679	690	693	695	695	695	702	703	703	687	*672*	125
3	691	691	691	693	697	702	703	698	687	684	678	684	686	686	690	697	697	695	690	697	699	698	697	674	692	605
4	670	683	680	687	695	705	706	705	697	689	683	685	686	686	693	703	702	699	704	702	703	706	713	706	695	688
5	701	702	703	703	705	710	713	710	707	704	703	703	704	709	710	712	716	697	696	703	699	686	678	691	703	865
6	699	698	699	697	687	703	712	711	708	700	681	675	697	703	703	690	709	717	696	702	711	693	696	716	700	803
7	650	649	680	677	683	693	699	693	680	687	690	689	684	687	694	682	703	705	703	707	697	701	700	703	689	536
8 *d*	696	689	706	701	703	700	683	705	697	697	693	697	697	699	694	704	702	710	692	727	733	679	677	680	698	761
9	693	690	690	694	694	696	697	697	697	696	693	692	695	693	699	706	710	692	713	697	700	698	701	697	697	730
10	694	693	694	696	701	701	700	701	694	687	690	688	687	697	700	703	705	705	703	703	703	702	700	701	698	748
11 *q*	681	701	700	697	701	703	704	703	700	693	689	691	692	698	702	703	706	707	707	707	706	705	707	706	700	809
12	702	700	697	696	697	707	705	701	697	692	684	687	694	698	703	707	706	701	701	708	707	710	706	704	700	810
13 *q*	707	704	700	701	702	705	710	712	708	703	700	699	700	702	703	705	706	704	697	700	704	706	706	703	704	887
14 *q*	704	707	703	699	700	707	711	713	710	703	697	697	699	697	697	696	703	704	710	708	708	711	706	706	704	896
15	707	714	711	713	712	719	719	714	713	702	700	698	700	701	703	707	709	710	710	710	716	720	709	710	*709*	1027
16	706	702	708	710	715	713	714	711	709	705	703	703	700	704	708	704	706	701	691	695	696	696	686	692	703	878
17	696	701	704	707	713	707	697	686	676	669	667	669	678	681	677	684	690	697	700	702	700	697	697	700	691	595
18	696	684	691	693	697	703	716	707	694	698	697	689	688	696	694	684	713	689	703	681	686	690	691	686	694	666
19 *d*	680	686	692	691	676	691	700	697	697	684	670	667	668	680	694	692	706	708	708	726	677	663	595	574	680	322
20 *d*	660	676	615	658	676	681	690	692	671	673	674	658	672	677	718	706	715	700	711	703	699	695	695	695	684	410
21	691	690	686	693	700	697	702	703	704	687	676	677	684	693	690	699	699	694	697	700	710	701	703	697	695	673
22	696	700	691	691	697	702	705	702	697	701	691	681	690	698	696	703	701	703	696	694	683	686	674	659	693	637
23	667	652	684	693	693	701	706	704	693	684	684	683	684	691	693	685	689	688	708	702	694	696	701	699	691	574
24	698	695	697	702	703	703	703	700	696	690	684	683	685	693	691	699	699	700	699	700	700	700	700	703	697	723
25 *q*	697	696	700	700	703	706	709	704	701	698	696	693	694	697	694	696	697	701	706	707	707	708	706	704	701	820
26	703	702	707	704	709	709	711	710	700	696	694	692	693	691	700	695	689	678	687	686	690	694	698	698	697	736
27	701	697	700	701	703	703	702	701	697	694	689	690	690	697	687	682	692	697	698	703	702	702	703	708	697	739
28 *q*	707	704	704	706	704	706	706	706	703	700	697	692	694	699	704	704	704	707	707	689	691	687	685	681	699	787
29	678	697	700	704	707	707	704	704	703	700	693	689	688	694	695	697	699	701	704	706	706	706	707	707	700	796
30	708	710	713	713	716	715	711	716	715	706	699	698	701	703	691	701	704	707	701	692	681	684	681	673	702	839
31 *d*	684	694	698	713	708	661	645	653	662	650	650	683	733	738	880	776	828	810	781	682	727	677	617	517	703	867
Mean	686	687	692	696	699	702	703	702	696	691	687	686	691	695	702	700	*706*	704	704	699	701	696	687	*683*	696	
Sum 21,000γ+	263	296	445	584	677	756	788	754	586	429	293	255	427	555	767	695	881	825	820	669	727	573	307	187		Grand Total 517,559

576 at 0-1h. 1 January 1968.

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

2 LERWICK (D) — 9° + — DECEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 200·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *d*	3·9	9·3	12·5	13·2	12·5	12·7	11·2	12·4	13·7	13·2	15·1	17·0	16·0	19·0	17·1	16·0	17·1	14·5	11·9	4·9	4·3	6·2	4·8	−11·5	11·1	67·0
2	−1·9	−5·6	−4·1	1·0	8·6	11·7	13·3	12·2	11·0	11·4	12·3	15·5	15·9	16·6	14·9	13·7	13·8	13·6	13·0	11·7	9·2	9·6	7·0	7·8	*9·7*	32·2
3	11·2	13·1	13·2	13·1	13·2	13·2	12·7	13·3	14·2	14·6	15·9	14·7	15·2	15·7	15·5	17·1	15·4	16·6	14·1	12·6	12·4	11·9	6·7	−0·6	13·1	115·0
4	8·3	9·2	12·6	11·2	12·0	12·4	13·3	13·5	12·6	11·9	12·7	14·7	16·8	17·3	17·6	16·7	16·0	14·1	14·4	13·7	13·1	12·4	10·5	9·5	13·2	116·5
5	12·2	12·5	12·3	12·9	13·4	13·4	13·7	13·6	13·2	13·5	14·4	15·5	15·9	16·8	16·9	17·2	18·6	17·9	14·9	15·0	11·0	−15·5	5·4	10·7	12·7	105·4
6	15·7	13·0	12·8	12·6	13·2	12·2	13·1	12·6	13·5	13·7	15·7	16·3	19·4	21·2	22·0	18·5	23·0	11·8	9·2	15·1	14·5	8·0	6·9	−12·7	13·4	121·3
7	0·7	0·6	8·0	12·7	14·3	12·4	12·7	13·9	13·5	13·4	13·8	15·9	15·9	16·2	17·3	16·4	14·1	16·1	14·4	5·2	13·6	13·7	12·3	9·9	12·4	97·0
8 *d*	9·5	15·5	13·8	12·3	11·1	11·6	15·8	15·9	14·5	13·6	13·3	15·7	15·0	15·6	14·5	15·7	13·3	0·8	10·6	9·0	19·9	11·9	10·6	7·6	12·8	107·1
9	6·4	10·9	15·3	12·6	12·0	12·2	13·1	12·7	12·6	13·2	13·7	14·6	15·5	16·2	13·6	14·7	16·4	10·1	7·8	14·5	11·8	12·7	14·0	14·4	13·0	111·0
10	12·8	13·8	14·8	11·9	11·7	12·6	13·2	12·8	12·0	11·6	14·6	14·9	14·5	15·4	14·9	14·4	13·8	13·7	13·6	13·1	12·8	11·7	11·7	11·9	13·3	118·2
11 *q*	14·6	11·4	12·0	13·2	12·5	12·5	12·7	12·2	11·9	11·7	12·5	14·4	14·5	15·5	15·7	14·3	13·9	13·6	13·2	13·0	12·9	12·9	12·6	12·8	13·2	116·5
12	12·7	12·4	12·4	9·9	10·6	9·2	9·9	10·8	10·8	11·0	12·5	15·2	15·8	16·2	15·5	14·7	15·5	16·1	16·1	13·8	11·9	10·4	12·5	12·4	12·8	108·3
13 *q*	12·7	13·6	12·7	13·3	13·0	12·7	12·2	12·6	13·0	12·7	13·6	15·2	15·6	16·9	16·1	15·0	15·3	15·7	16·1	12·0	13·4	12·8	12·7	12·5	13·8	131·4
14 *q*	13·0	12·6	12·6	11·7	11·6	12·5	12·9	12·5	12·4	12·5	12·4	14·6	16·4	17·4	17·7	14·7	15·1	14·8	13·8	13·7	13·1	11·8	12·9	12·5	13·5	125·2
15	12·7	8·2	7·1	8·8	10·2	9·8	11·5	12·4	12·6	12·7	14·1	16·4	18·7	20·9	21·1	21·8	24·5	20·3	15·9	16·6	15·5	14·1	10·8	12·1	14·5	148·8
16	13·3	13·2	14·3	14·7	14·5	14·3	13·6	13·3	13·0	13·6	13·9	14·5	16·1	17·5	17·7	16·6	16·4	15·8	14·1	12·9	10·1	7·8	2·5	9·9	13·5	123·6
17	11·0	12·9	13·3	13·3	13·8	15·8	20·3	17·3	14·8	14·7	14·5	15·5	18·3	22·1	21·7	16·5	15·5	15·4	14·4	13·5	13·6	13·1	12·1	7·8	15·1	161·2
18	5·2	7·3	12·4	13·0	14·7	15·8	14·8	17·7	17·2	13·5	13·7	14·9	16·4	18·3	21·7	22·9	22·6	19·2	16·6	9·1	7·4	11·5	11·8	12·0	14·6	149·7
19 *d*	12·0	11·5	12·3	13·4	15·9	18·1	14·7	13·4	14·0	13·5	13·9	16·4	21·2	21·3	17·2	21·2	18·1	18·3	20·6	6·6	6·2	8·1	4·2	1·5	13·9	133·6
20 *d*	10·8	11·6	12·1	18·4	11·9	14·9	15·4	15·2	18·7	15·5	13·6	15·3	19·2	16·5	10·0	19·1	21·2	15·9	11·5	14·5	12·1	10·6	11·4	10·6	14·4	146·0
21	10·7	13·3	16·3	15·6	14·8	14·9	15·2	14·6	15·9	16·5	16·1	19·1	19·3	16·2	14·7	16·0	8·0	13·6	16·7	14·5	6·6	11·4	12·8	11·9	14·4	144·7
22	10·5	9·4	8·7	12·6	13·0	13·5	13·3	13·5	13·0	13·7	16·1	14·0	15·9	17·8	15·3	15·9	15·9	17·1	15·7	13·5	9·5	6·3	15·8	9·9	13·3	119·9
23	−1·9	2·9	9·8	9·2	10·6	12·3	12·1	13·6	13·5	13·7	15·9	16·9	17·4	15·2	16·7	16·3	14·5	11·9	6·3	9·9	12·2	12·1	13·7	13·2	12·0	88·0
24	15·4	14·6	13·3	12·9	13·3	13·3	13·0	13·0	13·4	13·9	14·5	14·9	16·2	17·2	16·2	13·8	14·1	13·7	11·2	9·8	13·1	13·4	13·0	12·8	13·7	130·0
25 *q*	13·6	13·3	13·3	12·8	12·7	12·7	12·1	12·7	12·6	13·5	14·4	15·7	15·7	15·5	14·6	15·1	14·5	14·5	14·0	13·7	13·6	13·4	13·4	13·5	13·8	130·9
26	12·8	14·5	11·8	11·1	9·9	10·7	11·8	12·7	13·7	14·8	15·2	16·4	17·6	19·9	20·0	20·4	23·0	19·0	12·0	10·9	11·9	11·4	11·9	13·0	14·4	146·4
27	8·5	11·5	12·6	12·0	12·4	12·5	12·0	12·8	13·6	13·5	15·2	16·1	17·4	20·9	19·9	17·5	14·7	14·5	13·7	13·2	12·8	13·0	12·9	12·7	14·0	135·9
28 *q*	12·4	13·5	13·8	13·8	13·0	12·8	12·5	11·9	11·9	12·7	13·5	14·5	15·5	15·6	15·6	15·5	15·5	15·5	15·9	9·7	12·7	11·3	11·3	11·9	13·4	122·3
29	15·5	11·8	12·6	13·0	13·6	14·5	13·8	13·2	12·9	13·2	13·4	13·6	14·8	15·5	15·2	15·3	14·6	14·1	13·9	13·7	13·6	13·1	13·4	12·8	13·8	131·1
30	13·5	13·2	14·0	14·5	15·7	15·3	15·1	13·6	13·5	13·5	13·7	15·4	16·4	17·5	17·7	18·9	17·2	15·0	15·6	13·6	7·1	10·0	8·0	5·4	13·9	133·4
31 *d*	6·0	−0·5	4·3	14·6	21·2	26·8	29·5	28·2	20·2	14·6	17·6	13·4	15·2	14·6	22·0	20·1	15·4	11·9	12·2	18·5	14·8	14·3	14·5	7·5	*15·7*	176·9
Mean	10·1	10·5	11·7	12·4	12·9	13·5	13·9	13·9	13·7	13·4	14·3	15·4	16·6	*17·4*	17·0	16·8	16·3	14·7	13·7	12·3	11·8	10·5	10·8	*8·9*	13·4	
Sum 200·0′+	113·8	124·5	162·9	185·3	200·9	219·3	230·5	230·1	223·4	215·1	241·8	277·2	313·7	338·5	326·6	322·0	307·0	255·1	223·4	181·5	166·7	125·4	134·1	75·7		Grand Total 9994·5

−2·7 at 0-1h. 1 January 1968.

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

3 LERWICK (Z) — 47,000γ (0·47 CGS unit) + — DECEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	446	452	455	457	453	443	454	466	478	487	491	504	500	503	516	537	540	543	535	505	523	528	455	403	486	1674
2	338	311	311	369	409	434	459	475	483	484	484	486	491	494	493	498	498	494	490	489	486	476	465	466	*453*	883
3	473	480	483	484	484	482	480	480	482	481	478	478	484	494	523	525	519	518	523	509	498	492	485	480	492	1815
4	458	455	457	459	475	480	481	481	482	480	480	478	478	478	484	487	487	491	488	488	487	483	457	458	476	1432
5	470	475	478	478	478	479	478	478	478	475	473	470	473	474	475	479	480	501	508	501	508	503	479	473	482	1564
6	474	477	480	480	479	468	475	477	477	478	478	480	476	482	503	520	513	546	540	514	505	506	490	476	491	1794
7	417	427	443	465	474	478	480	474	483	485	483	483	486	492	494	508	505	494	493	495	488	485	486	481	479	1499
8 *d*	478	466	451	466	471	468	470	465	475	479	479	480	480	482	491	489	495	507	500	496	423	479	467	432	475	1389
9	463	475	476	480	483	483	483	484	484	485	486	486	486	484	487	485	483	500	497	503	503	494	484	487	486	1661
10	487	475	462	473	478	479	480	480	484	487	485	485	486	483	485	487	485	485	485	486	484	486	486	483	482	1576
11 *q*	474	457	471	479	480	480	480	480	483	486	486	485	485	483	484	485	484	482	482	482	484	484	484	484	481	1554
12	485	486	487	490	488	482	483	482	483	482	484	485	485	485	485	486	486	489	490	489	489	489	488	490	486	1668
13 *q*	489	487	486	485	484	481	480	479	479	482	484	484	484	485	486	484	485	486	492	494	489	486	486	486	485	1643
14 *q*	483	481	479	482	484	482	481	480	480	480	481	481	483	486	487	491	491	485	483	483	483	481	481	483	483	1591
15	483	482	478	472	471	469	468	470	471	473	472	475	473	475	481	484	487	493	510	508	506	517	524	506	485	1648
16	499	493	487	483	480	479	479	478	476	476	478	476	477	478	479	482	481	483	489	484	479	467	463	448	479	1494
17	445	444	453	463	464	468	467	470	476	484	489	499	507	523	531	521	509	499	494	490	488	488	488	481	485	1641
18	473	472	472	478	479	479	475	470	467	471	476	480	479	482	503	549	585	570	591	550	510	484	480	481	*498*	1956
19 *d*	471	449	459	459	443	424	456	475	479	485	489	490	490	501	527	540	575	571	585	561	490	508	433	337	487	1697
20 *d*	417	448	422	368	406	453	467	480	482	491	493	509	529	517	542	545	563	590	554	509	497	492	489	480	489	1743
21	478	474	466	450	465	476	480	483	481	485	490	491	487	491	500	500	529	511	503	506	515	508	502	501	491	1772
22	497	490	488	485	482	482	482	486	490	488	489	490	488	491	494	494	493	494	502	508	520	519	477	412	489	1741
23	427	435	453	474	482	482	485	486	490	494	491	490	492	494	497	506	509	518	519	496	504	503	493	486	488	1706
24	479	486	491	490	488	490	490	492	495	499	499	499	497	498	497	496	495	493	495	496	491	491	490	484	493	1821
25 *q*	482	483	483	485	485	484	485	486	488	491	491	491	488	488	490	490	490	490	487	487	487	487	487	487	487	1692
26	486	479	471	474	474	475	478	481	486	490	491	492	493	495	496	505	529	571	538	517	505	495	490	488	496	1899
27	471	466	475	479	479	481	481	482	487	488	490	492	494	499	518	524	504	494	490	488	488	489	488	486	489	1733
28 *q*	485	485	484	482	483	483	483	483	485	485	488	489	486	484	485	483	482	482	482	498	494	497	501	500	487	1689
29	478	454	480	483	483	481	481	483	485	490	494	499	499	496	493	491	490	488	486	486	485	485	483	485	486	1658
30	483	484	482	477	471	473	475	475	477	480	484	482	483	487	494	491	490	491	492	496	489	462	447	444	480	1509
31 *d*	442	413	380	368	368	384	406	417	437	474	511	566	567	558	605	646	636	616	550	508	596	570	470	497	499	1985
Mean	465	*463*	463	465	469	470	474	477	480	484	486	489	491	492	501	507	510	*512*	509	501	497	495	481	471	485	
Sum 14,000γ+	431	341	343	417	523	582	702	778	883	995	1067	1175	1206	1262	1525	1708	1798	1875	1773	1522	1394	1334	898	585		Grand Total 361,117

433 at 0-1h. 1 January 1968.

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH HOUSE

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	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph house °C
1 *d*	3323 2265	26	2323 2265	25	3212 2245	21	2222 1245	20	2	15
2	6411 1122	18	6311 1112	16	4411 1122	16	4420 0001	11	2	15
3	1001 1113	8	0001 1113	7	1001 1103	7	1000 3221	9	1	15
4	2211 1102	10	2211 1102	10	2101 0101	6	2200 0002	6	1	14
5	0000 1235	11	0000 1212	6	0000 1235	11	1000 0213	7	1	14
6	2212 2434	20	0212 2323	15	2112 2434	19	1111 2233	14	1	14
7	4232 2331	20	4232 2321	19	3222 2331	18	3211 0210	10	1	14
8 *d*	3232 2453	24	2232 2353	22	3122 1453	21	2110 1243	14	1	13
9	3110 2332	15	1100 1231	9	3110 2332	15	2000 0111	5	1	13
10	2112 0001	7	1111 0001	5	2112 0001	7	2000 0000	2	0	14
11 *q*	2000 0000	2	2000 0000	2	2000 0000	2	2000 0000	2	0	13
12	1101 1122	9	1100 0111	5	1101 1022	8	0000 0000	0	0	14
13 *q*	1000 0121	5	0000 0110	2	1000 0021	4	0000 0000	0	0	14
14 *q*	1100 0101	4	1100 0101	4	0000 0101	2	0000 0000	0	0	15
15	3210 0223	13	2110 0012	7	3200 0223	12	1000 0112	5	1	15
16	1101 1123	10	1101 1112	8	0101 0023	7	1000 0012	4	1	15
17	2231 2102	13	1111 2101	8	2231 2002	12	2112 2211	12	1	14
18	3222 2332	19	1222 2331	16	3222 2332	19	1011 2441	14	1	14
19 *d*	2322 3355	25	2312 2255	22	2322 3355	25	2321 3356	25	2	14
20 *d*	4333 4342	26	4333 4331	24	2322 4342	22	4412 3341	22	1	14
21	2112 2432	17	1112 2322	14	2112 2432	17	1201 1311	10	1	14
22	2122 2134	17	1111 1123	11	2022 2134	16	1000 0024	7	1	15
23	4221 2242	19	3121 2131	14	4211 2242	18	3110 0131	10	1	16
24	1000 1131	7	1000 1111	5	1000 1030	5	1000 0000	1	0	16
25 *q*	1000 0000	1	0000 0000	0	1000 0000	1	0000 0000	0	0	16
26	2100 2321	11	1000 1210	5	2100 2321	11	1000 0330	7	1	16
27	3000 2201	8	1000 2101	5	3000 2200	7	2000 2200	6	1	16
28 *q*	1000 0032	6	0000 0022	4	1000 0032	6	0000 0021	3	1	14
29	3100 0001	5	3100 0000	4	3100 0001	5	3000 0000	3	1	14
30	0111 1222	10	0110 1222	9	0111 0122	8	0000 0012	3	1	14
31 *d*	3443 6676	39	3433 6676	38	3443 5565	35	3335 5466	35	2	14
								Mean	0·90	15

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

MEAN MONTHLY AND ANNUAL VALUES OF GEOMAGNETIC ELEMENTS

For all, *a*, quiet, *q*, and disturbed, *d*, days for *H*, *D* and *Z* and for all days for *X*, *-Y*, and *F*

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	Horizontal (*H*) component			Declination (*D*) (west)			Vertical (*Z*) component			North component (*X*) all days	West component (*-Y*) all days	Inclination (*I*) (north) all days	Total force (*F*) all days
	a	*q*	*d*	*a*	*q*	*d*	*a*	*q*	*d*				
	14,000γ +			9° +			47,000γ +						
	γ	γ	γ	′	′	′	γ	γ	γ	γ	γ	° ′	γ
Jan.	676	682	658	15·6	16·1	14·8	459	455	459	14485	2362	72 49·0	49676
Feb.	679	684	673	15·6	16·0	15·2	460	458	466	14488	2362	72 48·8	49679
Mar.	687	689	686	15·8	15·9	15·5	452	450	456	14495	2364	72 48·2	49673
Apr.	689	692	690	15·2	15·3	15·0	451	452	449	14498	2362	72 48·0	49673
May	672	693	690	13·3	14·2	9·8	455	456	470	14482	2351	72 49·2	49671
June	686	692	661	13·6	13·9	12·2	467	468	465	14496	2355	72 48·5	49687
July	698	698	695	13·9	14·1	13·6	462	466	455	14508	2358	72 47·6	49685
Aug.	699	698	700	14·1	14·0	13·8	462	465	459	14509	2359	72 47·5	49686
Sept.	687	693	660	13·1	13·7	10·9	463	466	446	14497	2353	72 47·4	49684
Oct.	691	696	681	13·8	14·3	13·0	474	473	472	14501	2356	72 48·3	49695
Nov.	694	701	688	13·3	13·7	12·5	477	477	476	14504	2355	72 48·2	49699
Dec.	696	702	688	13·4	13·6	13·6	485	485	487	14506	2356	72 48·2	49707
Year	688	693	681	14·2	14·6	13·3	464	464	463	14497	2358	72 48·3	49685

ALL DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

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HORIZONTAL COMPONENT

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-7·1	*-8·0*	-7·9	-6·1	-6·0	-1·5	-1·6	+1·8	-2·2	-5·4	-5·5	-4·3	-3·4	-1·7	+2·5	+7·0	*+10·7*	+9·6	+6·9	+7·5	+5·8	+4·3	+4·8	-0·2
Feb.	-0·1	-2·2	-3·4	-1·4	+1·7	+5·4	+7·0	+7·0	+3·2	-5·6	-14·5	*-16·8*	-12·4	-8·5	-3·9	+0·7	+3·6	+9·1	+11·0	*+12·0*	+4·9	+4·3	-0·6	-0·5
Mar.	+5·7	+4·9	+3·8	+5·0	+6·2	+8·9	+9·8	+7·4	-0·1	-12·4	-21·7	*-26·5*	-25·8	-18·7	-10·1	-1·9	+4·0	+8·8	+9·8	*+10·5*	+10·2	+6·8	+7·3	+8·1
Apr.	+6·2	+3·3	-1·4	+0·1	+5·5	+8·1	+4·2	-1·3	-14·5	-29·8	-36·3	*-36·8*	-30·8	-18·9	-5·8	+6·5	+15·3	+22·0	*+26·0*	+23·9	+18·7	+14·1	+11·7	+10·0
May	-38·0	*-52·3*	-33·4	-32·4	-30·3	-31·5	-19·6	-13·8	-16·6	-21·1	-21·2	-16·6	+3·9	+13·9	+34·2	+47·0	+46·5	+62·8	*+68·2*	+56·5	+37·1	+6·7	-33·0	-17·0
June	-41·3	*-43·8*	-24·0	+2·0	+5·6	+5·0	-1·5	-7·9	-13·0	-21·5	-28·4	-27·0	-18·1	-4·7	+7·6	+20·6	+30·0	+35·7	+39·9	*+40·9*	+31·6	+18·9	+7·6	-14·2
July	+1·4	-2·6	-2·3	+0·8	-1·5	-5·1	-7·3	-12·3	-20·3	-29·1	*-32·7*	-31·5	-22·5	-9·6	+1·7	+13·8	+19·0	+27·5	*+32·2*	+31·4	+25·3	+14·6	+5·9	+3·2
Aug.	+4·7	+2·8	+1·9	+2·3	+2·5	+0·5	-4·5	-13·0	-22·9	-31·0	*-35·5*	-32·6	-23·9	-10·5	+2·5	+13·1	+18·1	+22·9	*+24·9*	+24·1	+20·3	+15·5	+11·1	+6·7
Sept.	-8·9	-6·0	-5·5	-2·3	+5·9	+4·2	-1·3	-6·7	-13·5	-22·0	-26·7	*-27·5*	-18·9	-9·2	+4·6	+15·5	+26·1	*+28·1*	+27·9	+20·3	+12·2	+4·8	+3·1	-4·2
Oct.	0·0	-2·4	+1·0	+6·4	+9·1	+10·6	+8·2	+3·4	-6·5	-17·4	-24·2	*-24·6*	-18·8	-9·6	-3·4	+2·4	+4·3	+7·0	+11·0	*+12·0*	+8·5	+10·1	+9·7	+3·2
Nov.	-0·9	-1·4	+0·6	+2·6	+5·6	*+9·0*	+7·9	+6·4	+1·7	-7·2	-12·4	*-13·8*	-11·1	-6·9	-3·3	+1·9	+4·7	+7·1	+7·3	+4·1	-0·6	-0·7	-0·8	+0·2
Dec.	-9·7	-8·7	-3·8	+0·6	+3·7	+6·1	+7·2	+6·0	+0·7	-4·4	-8·7	-10·1	-4·4	-0·4	+6·6	+4·1	*+10·2*	+8·3	+8·3	+3·3	+5·3	+0·2	-8·3	*-12·1*
Year	-7·3	-9·7	-6·2	-1·9	+0·7	+1·6	+0·7	-1·9	-8·7	-17·2	-22·3	*-22·3*	-15·5	-7·1	+2·8	+10·9	+16·0	+20·7	*+22·8*	+20·5	+14·9	+8·3	+1·5	-1·4
Winter	-4·5	-5·1	-3·6	-1·1	+1·3	+4·7	+5·1	+5·3	+0·9	-5·7	-10·3	*-11·3*	-7·8	-4·4	+0·5	+3·4	+7·3	*+8·5*	+8·4	+6·7	+3·9	+2·0	-1·2	-3·2
Equinox	+0·7	-0·1	-0·5	+2·3	+6·7	+7·9	+5·2	+0·7	-8·7	-20·4	-27·2	*-28·9*	-23·6	-14·1	-3·7	+5·6	+12·4	+16·5	*+18·7*	+16·7	+12·4	+8·9	+7·9	+4·3
Summer	-18·3	-24·0	-14·5	-6·8	-5·9	-7·8	-8·2	-11·7	-18·2	-25·7	*-29·5*	-26·7	-15·1	-2·7	+11·5	+23·6	+28·4	+37·2	*+41·3*	+38·2	+28·6	+13·9	-2·1	-5·3

DECLINATION

	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	-2·45	-1·98	-2·70	*-3·03*	-2·20	-0·76	-0·12	-0·39	-0·38	-0·26	+0·31	+1·62	+2·95	*+3·79*	+3·55	+3·08	+2·52	+2·24	+0·66	-0·41	-0·89	-1·28	-2·00	-1·87
Feb.	-2·78	-2·19	-2·11	-1·36	-1·95	-1·77	-1·37	-1·84	-2·30	-2·13	-0·68	+1·75	+3·80	*+5·06*	+4·87	+3·92	+2·97	+2·12	+1·69	+1·37	-0·39	-0·98	-2·79	*-2·91*
Mar.	-1·53	-1·86	-1·50	-1·54	-1·70	-2·27	-2·81	-3·82	*-4·63*	-3·77	-1·58	+1·85	+5·38	*+7·02*	+6·86	+5·08	+3·46	+1·53	+0·57	+0·50	-0·44	-1·31	-1·72	-1·77
Apr.	-1·45	-2·60	-2·73	-2·69	-3·43	-4·21	-4·93	*-5·70*	-5·47	-3·05	-0·23	+3·39	+6·73	*+7·90*	+6·99	+5·21	+3·49	+2·16	+1·62	+0·47	-0·14	-0·08	-0·50	-0·75
May	-5·27	-6·44	-4·33	-3·27	-4·41	-5·04	-6·22	*-6·73*	-4·32	-1·89	+1·01	+4·61	+6·59	*+7·00*	*+7·01*	+6·84	+5·53	+4·84	+4·55	+3·43	+2·25	+0·80	-3·82	-2·72
June	-3·76	-3·51	-4·72	-4·02	-5·10	-6·15	*-6·74*	-6·23	-5·40	-3·58	-0·63	+3·06	+6·05	*+7·55*	*+7·66*	+7·15	+5·89	+4·50	+3·62	+2·51	+1·82	+1·49	+0·32	-1·78
July	-1·73	-2·13	-3·01	-3·79	-4·61	-5·97	*-6·75*	-6·72	-5·57	-3·23	-0·65	+2·46	+5·76	*+7·32*	+7·05	+6·28	+4·98	+3·29	+2·44	+2·10	+2·02	+0·95	+0·18	-0·67
Aug.	-1·71	-1·83	-2·18	-3·10	-4·36	-5·40	*-6·33*	-5·94	-4·41	-2·12	+0·76	+4·20	+7·36	*+8·53*	+7·69	+5·74	+3·22	+1·39	+1·12	+0·56	+0·22	-0·09	-1·37	-1·95
Sept.	-2·41	-2·59	-2·80	*-3·59*	-2·93	-3·45	-3·44	-3·00	-2·93	-1·36	+1·14	+4·23	+6·71	*+7·42*	+6·12	+4·89	+2·16	+1·49	+1·23	-0·13	-0·98	-1·68	-1·84	-2·26
Oct.	-3·22	-2·58	-2·67	-1·82	-1·88	-1·98	-1·99	-3·06	*-3·33*	-2·33	+0·51	+3·32	+5·82	*+6·79*	+6·01	+4·49	+2·96	+1·43	+1·05	+0·05	-1·30	-2·13	-2·27	-1·87
Nov.	-2·69	-1·35	-1·80	-1·24	-0·72	-0·72	-0·01	-0·36	-0·99	-0·77	+0·97	+2·57	+3·87	*+4·49*	+4·24	+3·75	+2·91	+1·59	+0·73	-0·78	-3·03	*-3·80*	-3·30	-3·56
Dec.	-3·32	-2·96	-1·72	-1·01	-0·50	+0·10	+0·45	+0·44	+0·23	-0·05	+0·82	+1·95	+3·14	*+3·93*	+3·56	+3·41	+2·91	+1·25	+0·23	-1·13	-1·60	-2·93	-2·66	*-4·54*
Year	-2·69	-2·67	-2·69	-2·54	-2·82	-3·13	-3·35	*-3·61*	-3·29	-2·05	+0·15	+2·92	+5·35	*+6·40*	+5·97	+4·99	+3·58	+2·32	+1·63	+0·71	-0·21	-0·92	-1·81	-2·22
Winter	-2·81	-2·12	-2·08	-1·66	-1·34	-0·79	-0·26	-0·54	-0·86	-0·80	+0·35	+1·97	+3·44	*+4·32*	+4·05	+3·54	+2·83	+1·80	+0·83	-0·24	-1·48	-2·25	-2·69	*-3·22*
Equinox	-2·15	-2·41	-2·43	-2·41	-2·49	-2·98	-3·29	-3·89	*-4·09*	-2·63	-0·04	+3·20	+6·16	*+7·28*	+6·49	+4·92	+3·02	+1·65	+1·12	+0·21	-0·71	-1·30	-1·58	-1·66
Summer	-3·12	-3·48	-3·56	-3·55	-4·62	-5·64	*-6·51*	-6·41	-4·93	-2·71	+0·12	+3·58	+6·44	*+7·60*	+7·35	+6·50	+4·91	+3·51	+2·93	+2·15	+1·58	+0·79	-1·17	-1·78

VERTICAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-6·9	-8·6	-10·0	-13·1	*-19·2*	-16·9	-18·3	-13·9	-8·0	-5·1	-3·3	-1·0	-0·2	+2·3	+5·8	+15·2	+22·0	+19·0	+18·8	+16·9	+12·9	+8·8	+5·6	-2·8
Feb.	-7·0	-7·2	*-13·2*	-12·8	-11·4	-9·0	-9·1	-7·7	-6·3	-4·3	-4·4	-1·6	+2·0	+2·1	+3·7	+7·0	+11·1	*+19·4*	+17·3	+18·4	+13·9	+9·0	-4·0	-5·9
Mar.	*-10·9*	-10·6	-8·3	-7·1	-6·5	-6·6	-3·6	-1·1	-0·1	-0·7	-2·6	-4·4	-4·7	-3·2	+1·9	+7·9	+12·8	*+15·6*	+13·5	+12·4	+10·7	+5·5	-2·9	-7·0
Apr.	-10·7	-15·0	*-18·1*	-16·2	-12·3	-8·2	-2·6	-1·1	-0·5	-0·2	-1·9	-4·1	-4·4	-2·0	+3·1	+8·6	+14·3	*+19·7*	+17·9	+15·3	+13·7	+7·7	+1·3	-4·3
May	-30·2	-29·9	-26·7	*-51·9*	-39·7	-21·7	-6·0	+0·3	+2·8	+3·0	+3·5	+4·2	+6·0	+15·0	+25·8	+27·7	*+31·4*	+30·3	+28·3	+23·8	+14·7	+10·9	-9·1	-12·5
June	-25·5	-16·3	*-27·7*	-15·3	-5·7	-4·9	+0·2	+2·0	+3·3	+2·2	+0·5	-2·7	-2·5	+0·3	+4·8	+10·8	+17·6	*+21·6*	+20·7	+18·0	+11·7	+4·8	-4·3	-13·6
July	-9·6	-16·4	*-17·6*	-12·6	-9·4	-8·6	-5·1	-1·0	+0·5	-0·8	-2·4	-4·8	-5·4	-2·4	+3·3	+8·4	+13·7	+16·3	*+16·8*	+14·5	+12·5	+10·4	+2·2	-2·5
Aug.	-12·6	*-13·3*	-10·8	-7·6	-2·3	+0·1	+0·6	+1·2	-0·2	-3·5	-6·5	-9·2	-9·5	-4·8	+2·2	+9·4	+16·9	*+17·8*	+14·8	+11·8	+8·9	+5·0	-0·5	-7·9
Sept.	*-34·1*	-32·4	-31·4	-24·7	-17·3	-10·8	-5·3	-2·0	-0·2	+3·5	+5·0	+5·5	+7·0	+10·2	+17·7	+23·1	+31·8	*+32·9*	+29·5	+20·1	+6·6	-2·2	-11·3	-21·2
Oct.	-13·3	*-19·3*	-19·1	-12·0	-6·1	-4·9	-3·0	+0·2	+1·8	+1·2	+0·1	-0·6	+1·1	+4·3	+9·7	*+15·2*	+14·2	+11·7	+11·2	+12·6	+8·0	+2·3	-3·6	-11·7
Nov.	-10·0	-12·7	*-16·0*	-12·7	-9·4	-8·2	-7·8	-5·9	-2·7	-0·9	-1·0	+0·5	+2·2	+4·7	+7·5	+8·2	+10·9	+17·2	+16·1	*+18·7*	+10·8	+1·8	-3·5	-7·8
Dec.	-19·9	*-22·8*	-22·6	-20·3	-16·9	-14·9	-11·1	-8·7	-5·2	-1·7	+0·6	+4·2	+5·1	+6·9	+15·5	+21·3	+24·2	*+26·8*	+23·4	+15·3	+11·3	+9·2	-4·8	-14·9
Year	-15·9	-17·0	*-18·5*	-17·2	-13·0	-9·5	-5·9	-3·1	-1·2	-0·6	-1·0	-1·2	-0·3	+2·8	+8·4	+13·6	+18·4	*+20·7*	+19·0	+16·5	+11·3	+6·1	-2·9	-9·3
Winter	-10·9	-12·8	*-15·5*	-14·7	-14·2	-12·3	-11·6	-9·1	-5·5	-3·0	-2·0	+0·5	+2·3	+4·0	+8·1	+12·9	+17·1	*+20·6*	+18·9	+17·3	+12·2	+7·2	-1·7	-7·9
Equinox	-17·3	*-19·3*	-19·2	-15·0	-10·5	-7·6	-3·6	-1·0	+0·3	+0·9	+0·1	-0·9	-0·3	+2·3	+8·1	+13·7	+18·3	*+20·0*	+18·0	+15·1	+9·7	+3·3	-4·1	-11·1
Summer	-19·5	-19·0	-20·7	*-21·9*	-14·3	-8·8	-2·6	+0·6	+1·6	+0·2	-1·2	-3·1	-2·9	+2·0	+9·0	+14·1	+19·9	*+21·5*	+20·1	+17·0	+11·9	+7·8	-2·9	-9·1

"Winter" comprises the four months, January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

DIURNAL INEQUALITIES OF THE GEOMAGNETIC ELEMENTS

INTERNATIONAL QUIET DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

7 LERWICK 1967

HORIZONTAL COMPONENT

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	−0·2	+0·5	+0·6	+1·2	+1·9	+2·8	+4·0	+3·9	+0·4	−4·2	−10·5	−13·0	*−14·6*	−9·9	−4·0	+1·4	+3·3	+4·4	+5·4	*+6·1*	+5·6	+6·0	+4·9	+4·0
Feb.	+2·3	+2·0	+2·4	+2·9	+4·6	+6·4	+5·7	+5·4	+3·4	−5·3	−13·4	*−17·4*	−14·9	−10·8	−6·0	−0·5	+4·0	+6·0	*+7·1*	+4·2	+2·0	+3·1	+3·4	+3·4
Mar.	+5·9	+5·6	+4·5	+4·8	+5·2	+6·9	+7·4	+5·8	−1·5	−14·0	−23·3	*−27·4*	−24·9	−18·8	−9·9	+1·8	+0·4	+3·9	+8·4	+11·0	+12·7	*+13·4*	+11·1	+11·0
Apr.	+10·3	+9·3	+8·2	+6·9	+6·7	+7·3	+4·3	−3·5	−18·4	−33·3	*−41·9*	−40·7	−31·5	−18·3	−3·4	+6·3	+12·9	+16·9	+17·5	+18·1	*+18·6*	+17·9	+15·1	+14·7
May	+4·3	−0·7	+1·4	+3·3	+4·1	+2·5	−0·9	−7·3	−13·8	−21·9	−30·9	−32·1	*−32·3*	−22·3	−10·8	+1·9	+13·9	+25·7	*+29·3*	+25·9	+21·2	+16·1	+12·9	+10·5
June	+0·3	+0·5	+3·1	+3·9	+5·3	+2·1	−5·9	−13·1	−19·7	−28·1	*−34·1*	−33·3	−25·1	−11·7	−0·9	+6·9	+18·1	+22·5	+23·1	*+23·5*	+19·9	+18·1	+13·7	+10·9
July	+3·8	+3·3	+3·8	+4·6	+5·4	+2·1	−3·4	−9·2	−16·4	−27·3	*−33·8*	−32·8	−27·8	−13·9	−5·2	+4·0	+12·0	+18·9	+23·0	*+23·2*	+21·2	+17·7	+14·4	+12·4
Aug.	+6·6	+5·3	+3·9	+5·0	+7·3	+4·5	−2·0	−10·1	−20·1	−32·4	−40·3	*−40·5*	−29·6	−12·3	+3·9	+13·6	+18·7	*+24·5*	+23·8	+18·5	+16·9	+13·4	+11·9	+9·5
Sept.	+5·8	+4·7	+5·0	+6·3	+6·9	+5·4	+3·3	−4·3	−13·0	−20·9	−25·8	*−27·5*	−23·0	−16·7	−8·8	−0·1	+7·1	+11·6	+13·1	*+16·7*	+16·4	+13·5	+12·0	+12·3
Oct.	+8·2	+9·5	+7·1	+6·6	+7·9	+8·7	+6·6	+2·1	−7·1	−18·6	−26·5	*−27·1*	−22·0	−14·7	−9·3	−2·4	+3·5	+6·3	+9·0	+9·5	+9·3	+10·6	+11·3	*+11·5*
Nov.	−0·2	−0·8	−0·7	+1·0	+2·6	+3·2	+4·8	+3·4	−0·7	−8·0	−12·4	*−13·2*	−10·8	−5·2	−2·1	+0·2	+2·4	+3·8	+6·2	*+6·8*	+6·5	+5·2	+4·6	+3·4
Dec.	−2·4	+0·7	−0·2	−1·1	+0·3	+3·8	*+6·3*	+5·9	+2·8	−2·3	−5·8	*−7·3*	−5·8	−3·1	−1·6	−0·9	+1·5	+3·0	+3·7	+0·5	+1·6	+1·7	+0·4	−1·7
Year	+3·7	+3·3	+3·3	+3·8	+4·9	+4·6	+2·5	−1·7	−8·7	−18·0	−24·9	*−26·0*	−21·9	−13·1	−4·8	+2·7	+8·1	+12·3	*+14·1*	+13·7	+12·7	+11·4	+9·6	+8·5
Winter	−0·1	+0·6	+0·5	+1·0	+2·3	+4·1	+5·2	+4·7	+1·5	−4·9	−10·5	*−12·7*	−11·5	−7·3	−3·4	+0·1	+2·8	+4·3	*+5·6*	+4·4	+3·9	+4·0	+3·3	+2·3
Equinox	+7·5	+7·3	+6·2	+6·1	+6·7	+7·1	+5·4	0·0	−10·0	−21·7	−29·4	*−30·7*	−25·3	−17·1	−7·9	+1·4	+6·0	+9·7	+12·0	+13·8	*+14·3*	+13·9	+12·4	+12·4
Summer	+3·7	+2·1	+3·1	+4·2	+5·5	+2·8	−3·1	−9·9	−17·5	−27·4	*−34·8*	−34·7	−28·7	−15·1	−3·3	+6·6	+15·7	+22·9	*+24·8*	+22·8	+19·8	+16·3	+13·2	+10·8

DECLINATION

	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	−1·01	−0·86	−0·55	−0·47	−0·56	−0·69	−1·03	−1·40	−1·95	*−2·11*	−1·32	+0·13	+1·71	+2·52	*+2·69*	+1·81	+1·36	+0·89	+0·75	+0·36	+2·15	−0·59	−0·96	−0·87
Feb.	−0·99	−0·76	−0·81	−0·92	−1·00	−1·25	−1·60	−1·96	−2·33	*−2·38*	−1·27	+0·88	+2·41	+3·34	*+3·39*	+2·68	+1·84	+2·05	+1·90	+1·22	+0·43	−1·08	−2·23	−1·56
Mar.	−1·41	−1·19	−1·33	−1·63	−1·85	−2·12	−2·55	−3·41	*−4·55*	−3·77	−1·83	+1·15	+4·27	*+5·57*	+5·13	+3·55	+2·23	+1·28	+1·23	+0·89	+0·41	+0·25	−0·03	−0·29
Apr.	−0·49	−0·90	−1·59	−2·38	−3·14	−3·93	−5·02	*−6·44*	−6·17	−4·36	−1·25	+2·30	+5·11	*+6·22*	+5·73	+4·56	+3·16	+2·07	+1·76	+1·66	+1·43	+0·76	+0·75	+0·16
May	−0·01	+1·08	−0·95	−2·27	−4·17	−5·40	−6·45	*−7·29*	−5·57	−3·20	+0·13	+3·45	+5·97	*+6·96*	+6·55	+4·67	+2·85	+1·64	+1·17	+0·89	−0·07	−0·56	+0·03	+0·55
June	−1·39	−1·29	−1·83	−3·01	−4·39	−5·35	*−5·85*	−5·79	−5·49	−4·23	−1·35	+2·23	+4·51	*+5·83*	+5·77	+5·21	+4·61	+3·53	+2·59	+1·91	+1·69	+1·29	+0·87	+0·07
July	−0·86	−1·86	−2·00	−2·86	−4·40	−5·84	*−6·46*	−6·26	−5·42	−3·88	−1·16	+2·26	+5·96	*+7·40*	+6·98	+5·54	+3·88	+2·58	+1·74	+1·34	+1·46	+1·36	+0·74	−0·24
Aug.	+0·01	−0·53	−1·23	−1·49	−3·49	−5·54	−6·67	*−6·83*	−5·85	−3·15	+0·53	+4·15	+7·03	*+7·55*	+5·67	+2·99	+1·27	−0·20	+0·33	+0·71	+1·65	+1·55	+1·25	+0·29
Sept.	−2·00	−1·95	−1·78	−2·28	−2·76	−3·27	−4·18	*−4·78*	−4·24	−2·31	−0·06	+3·02	+5·70	*+6·39*	+5·40	+3·62	+2·02	+1·01	+0·52	+0·70	+0·94	+0·33	+0·06	−0·10
Oct.	−1·40	−1·22	−1·36	−1·50	−1·80	−2·01	−2·56	−3·62	*−4·06*	−2·64	+0·22	+3·32	+5·36	*+5·54*	+4·72	+3·40	+1·86	+0·85	+0·08	+0·28	−0·28	−0·76	−1·08	−1·34
Nov.	−1·38	−1·55	−1·21	−0·96	−0·89	−0·95	−1·10	−1·59	−2·19	−2·22	−0·19	+1·55	+2·64	*+3·09*	+2·83	+2·14	+1·67	+1·25	+0·84	+0·45	−0·01	−0·52	−0·61	−1·09
Dec.	−0·29	−0·68	−0·67	−0·59	−0·99	−0·92	−1·07	−1·17	*−1·19*	−0·94	−0·27	+1·33	+1·99	*+2·62*	+2·39	+1·37	+1·31	+1·26	+1·05	−1·13	−0·41	−1·12	−0·97	−0·91
Year	−0·93	−0·99	−1·28	−1·70	−2·45	−3·11	−3·71	*−4·21*	−4·08	−2·93	−0·65	+2·15	+4·39	*+5·25*	+4·77	+3·46	+2·34	+1·52	+1·16	+0·77	+0·78	+0·08	−0·18	−0·46
Winter	−0·92	−0·96	−0·81	−0·73	−0·86	−0·95	−1·20	−1·53	−1·91	−1·91	−0·76	+0·97	+2·19	*+2·89*	+2·83	+2·00	+1·55	+1·36	+1·13	+0·23	+0·54	−0·83	*−1·19*	−1·11
Equinox	−1·33	−1·31	−1·51	−1·95	−2·39	−2·83	−3·58	−4·56	*−4·75*	−3·27	−0·73	+2·45	+5·11	*+5·93*	+5·25	+3·78	+2·32	+1·30	+0·90	+0·88	+0·63	+0·15	−0·07	−0·39
Summer	−0·56	−0·65	−1·50	−2·41	−4·11	−5·53	−6·36	*−6·54*	−5·58	−3·61	−0·46	+3·02	+5·87	*+6·93*	+6·24	+4·60	+3·15	+1·89	+1·46	+1·21	+1·18	+0·91	+0·72	+0·13

VERTICAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	−2·7	−1·9	−2·2	−2·3	−0·7	−1·9	−0·3	+0·3	+0·4	+2·1	+1·3	−0·5	−0·7	−0·7	+0·2	+0·9	+0·1	+0·7	+1·1	+1·7	*+2·4*	+1·5	+1·1	+0·1
Feb.	−2·3	−1·2	−1·3	−1·2	−1·6	−1·3	−1·4	−2·2	−1·5	−0·8	−2·5	−3·4	−4·7	*−4·8*	−3·3	−0·8	+0·8	+1·9	+2·8	+5·6	*+8·9*	+8·2	+4·5	+1·6
Mar.	+0·7	+2·2	+2·7	+3·1	+3·3	+1·8	+0·7	+1·1	+1·9	+0·2	−2·1	−4·9	*−8·3*	−8·2	−5·5	+0·1	+2·9	+4·2	+2·9	+1·1	+0·7	−0·2	−0·7	+0·3
Apr.	−2·7	−1·4	+0·7	+3·4	+5·4	+5·7	*+6·6*	+6·0	+3·5	+1·0	−3·1	−8·0	*−11·7*	−10·6	−7·3	−3·4	+1·2	+5·7	+6·0	+4·2	+2·3	+0·6	−0·9	−3·2
May	−9·2	*−14·9*	−10·4	−3·2	+1·1	+2·6	+1·2	+0·1	−2·8	−5·4	−6·9	−9·8	−8·2	−3·1	+1·6	+7·2	+9·1	+9·6	+9·8	+9·3	*+10·2*	+7·2	+3·3	+1·6
June	−6·8	−2·7	−0·8	+1·2	+2·6	+3·9	+3·8	+1·2	−0·6	+0·1	−4·4	−9·8	*−10·2*	−6·7	−1·2	+1·4	+3·4	+5·7	*+6·4*	+5·0	+3·6	+2·5	+1·6	+0·8
July	+1·0	+1·8	+2·8	+4·0	+5·4	+5·9	*+6·2*	+4·2	+0·2	−3·2	−5·6	−6·6	−10·4	*−10·8*	−7·4	−4·2	+0·8	+3·9	+3·6	+3·2	+2·8	+1·4	+1·2	−0·2
Aug.	−1·5	−0·1	+1·8	+2·1	+2·7	+4·9	+5·7	+4·7	+3·4	−1·1	−6·5	−12·1	*−13·9*	−12·5	−5·6	+0·5	+2·9	+5·9	*+7·1*	+6·5	+3·0	+2·1	+0·3	−0·3
Sept.	−4·6	−3·7	−2·6	−0·6	+1·8	+4·5	*+5·8*	+5·2	+3·4	+0·1	−2·6	−5·4	*−8·0*	−7·5	−4·4	−1·0	+1·2	+2·5	+3·2	+2·8	+3·0	+3·3	+2·4	+1·2
Oct.	−2·1	−2·8	−2·5	−0·9	+0·1	+0·2	+0·7	+3·1	*+3·3*	+0·4	−2·5	*−4·9*	−4·1	−1·4	+0·9	+2·5	+2·7	+2·4	+2·9	+2·1	+1·9	+0·8	−0·5	−2·3
Nov.	+1·5	+0·9	+0·5	+0·5	+0·5	+0·1	−0·5	−0·9	+0·1	−0·5	*−2·9*	*−2·9*	*−2·9*	−2·7	+0·1	+2·1	+2·5	+2·7	+1·7	+1·1	+0·3	−0·3	−0·3	−0·7
Dec.	−2·2	*−6·1*	−4·2	−2·1	−1·5	−2·8	−0·9	−3·1	−1·8	+0·1	+1·2	+1·3	+0·4	+0·5	+1·6	+1·9	+1·7	+0·2	+0·5	*+4·1*	+2·6	+2·3	+3·0	+3·3
Year	−2·6	−2·5	−1·3	+0·3	+1·6	+2·0	+2·3	+1·6	+0·8	−0·6	−3·1	−5·6	*−6·9*	−5·7	−2·5	+0·6	+2·4	+3·8	*+4·0*	+3·9	+3·5	+2·5	+1·3	+0·2
Winter	−1·4	*−2·1*	−1·8	−1·3	−0·8	−1·5	−0·8	−1·5	−0·7	+0·2	−0·7	−1·4	−2·0	−1·9	−0·3	+1·0	+1·3	+1·4	+1·5	+3·1	*+3·5*	+2·9	+2·1	+1·1
Equinox	−2·2	−1·4	−0·4	+1·3	+2·7	+3·1	+3·5	*+3·9*	+3·0	+0·4	−2·6	−5·8	*−8·0*	−6·9	−4·1	−0·5	+2·0	+3·7	+3·7	+2·5	+2·0	+1·1	+0·1	−1·0
Summer	−4·1	−4·0	−1·7	+1·0	+2·9	+4·3	+4·2	+2·5	+0·1	−2·4	−5·9	−9·6	*−10·7*	−8·3	−3·1	+1·2	+4·1	+6·3	*+6·7*	+6·0	+4·9	+3·3	+1·6	+0·5

"Winter" comprises the four months, January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

INTERNATIONAL DISTURBED DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

8 LERWICK 1967

HORIZONTAL COMPONENT

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-30·6	-43·2	-44·4	-38·4	*-47·2*	-26·5	-31·0	-13·2	-16·4	-14·0	+2·2	+14·0	+17·0	+15·4	+26·4	+44·8	*+48·6*	+37·9	+26·2	+32·0	+23·6	+13·4	+15·0	-11·6
Feb.	+4·2	-9·5	-17·2	-13·3	-8·0	+4·3	+6·4	+8·7	+1·6	-12·3	*-22·8*	-10·3	+0·6	+5·5	+10·0	+0·9	+6·4	+17·1	+14·2	*+34·5*	+7·8	+9·5	-19·8	-18·5
Mar.	+1·3	+1·8	+2·1	+0·9	+3·0	+11·9	+11·3	+9·2	+3·1	-10·3	-18·0	-19·3	*-24·1*	-15·8	-10·9	-2·1	+10·0	*+29·7*	+11·1	+10·8	+6·7	-5·9	-6·2	-0·3
Apr.	+1·3	-3·8	-22·7	-12·9	-5·1	+5·6	+1·5	-5·1	-23·3	-43·6	*-44·1*	-36·7	-32·3	-15·6	+1·3	+19·3	+29·5	+44·4	*+58·1*	+39·5	+28·3	+10·4	+3·3	+2·7
May	-192·7	*-241·8*	-108·5	-175·5	-184·7	-159·8	-102·9	-43·1	-16·3	+17·0	+37·7	+62·1	+158·1	+167·6	*+213·1*	+199·9	+166·3	+197·0	+189·7	+151·5	+85·7	-51·8	-235·7	-132·9
June	*-211·7*	-182·3	-109·9	+26·9	+31·3	+24·5	+18·3	+18·7	+16·7	+8·3	+0·5	-3·3	+5·7	+17·5	+26·1	+44·1	+52·5	+63·1	+81·7	*+97·1*	+72·9	+29·9	-11·9	-116·7
July	+3·2	-13·5	-9·4	+8·1	+0·4	-21·7	-18·8	-15·1	-24·8	*-32·3*	-28·8	-25·9	-17·2	+0·3	+15·0	+23·9	+26·6	+35·7	+38·6	*+39·5*	+31·6	+9·3	-12·2	-12·5
Aug.	+7·3	+1·9	-1·7	-1·9	-0·9	0·0	-3·9	-13·9	-20·3	-28·1	*-33·5*	-30·3	-30·1	-8·7	+15·9	+19·9	+16·7	+26·6	*+29·5*	+28·5	+20·7	+12·7	-0·1	-6·3
Sept.	*-60·6*	-55·5	-40·7	-32·8	+5·5	-4·7	-14·8	-15·5	-12·9	-10·4	-17·1	-18·1	-3·8	+13·3	+46·7	+62·6	*+86·9*	+75·3	+78·4	+31·7	-9·1	-23·2	-25·3	-55·9
Oct.	-32·3	-30·2	-19·5	+6·0	+15·4	+19·3	+15·6	+11·2	+3·1	-10·8	-21·5	-25·2	-18·9	-1·2	+17·3	*+24·6*	+13·0	+13·7	+17·2	+19·0	+9·7	+6·8	+0·1	*-32·4*
Nov.	+4·4	-1·7	-4·5	+4·0	*+9·9*	+6·3	+7·2	+9·7	+2·9	-7·8	-12·7	-11·3	-7·0	-0·9	+4·7	+5·0	+9·3	+9·1	+7·4	-1·3	-16·7	*-17·6*	+0·9	+0·7
Dec.	-9·6	-2·7	-8·2	+0·5	+1·1	-2·0	-3·1	+1·9	-5·4	-12·5	-16·8	-18·1	+2·8	+10·7	*+46·2*	+24·1	+38·7	+38·2	+31·5	+6·5	+17·2	-10·7	-57·4	*-72·9*
Year	-43·0	*-48·4*	-32·1	-19·0	-14·9	-11·9	-9·5	-3·9	-7·7	-13·1	-14·6	-10·2	+4·2	+15·7	+34·3	+38·9	+42·0	*+49·0*	+48·6	+40·8	+23·2	-1·4	-29·1	-38·1
Winter	-7·9	-14·3	-18·6	-11·8	-11·1	-4·5	-5·1	+1·8	-4·3	-11·7	-12·5	-6·4	+3·3	+7·7	+21·8	+18·7	*+25·7*	+25·6	+19·8	+17·9	+8·0	-1·3	-15·3	*-25·6*
Equinox	-22·6	-21·9	-20·2	-9·7	+4·7	+8·0	+3·4	-0·1	-7·5	-18·8	*-25·2*	-24·8	-19·8	-4·8	+13·6	+26·1	+34·9	+40·8	*+41·2*	+25·3	+8·9	-3·0	-7·0	-21·5
Summer	-98·5	*-108·9*	-57·4	-35·6	-38·5	-39·3	-26·8	-13·3	-11·2	-8·8	-6·0	+0·7	+29·1	+44·2	+67·5	+71·9	+65·5	+80·6	*+84·9*	+79·1	+52·7	0·0	-65·0	-67·1

DECLINATION

	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	-5·36	-5·95	-11·84	*-15·00*	-7·93	-0·16	+3·76	+3·01	+2·88	+1·92	+2·15	+3·56	+6·02	*+8·69*	+7·80	+7·90	+5·07	+4·40	+2·56	+0·33	-3·20	-2·16	-4·55	-3·90
Feb.	-1·77	-1·92	-2·87	-1·26	-4·52	-1·51	-0·92	-0·64	-0·55	-0·60	+0·33	+2·30	+3·45	+6·06	*+6·23*	+3·50	+3·44	+2·51	+1·14	+3·20	-1·09	-1·08	-6·53	-6·90
Mar.	-1·67	-2·85	-3·11	-1·65	-1·05	-3·06	-3·87	-4·29	-4·05	-2·47	-0·91	+3·33	+6·95	*+8·97*	+8·85	+7·97	+5·57	+1·70	-0·15	+0·29	-2·33	-3·93	*-5·53*	-2·71
Apr.	-3·80	-5·51	-5·32	-4·94	-4·70	-5·33	-6·84	*-7·46*	-6·34	-1·17	+2·10	+5·74	+8·94	*+9·51*	+8·70	+6·98	+5·62	+3·61	+2·30	+1·18	-1·30	-0·91	-1·32	+0·26
May	-21·84	*-23·62*	-8·89	-3·28	-2·38	-0·54	-7·40	-5·42	+1·13	+0·42	+1·84	+5·74	+5·14	+5·50	+7·59	*+13·00*	+11·26	+12·14	+12·98	+10·20	+8·07	+3·24	-17·28	-7·60
June	-12·16	-9·67	*-14·10*	-6·17	-5·43	-6·86	-6·71	-5·19	-4·38	-1·49	+2·04	+5·29	+8·74	+9·91	*+10·22*	+10·11	+8·77	+6·64	+6·99	+4·59	+2·30	+2·99	-0·22	-6·21
July	-3·66	-3·89	-4·72	*-5·97*	-5·38	-5·87	-5·82	-5·79	-3·48	-0·49	+0·58	+3·21	+6·48	*+8·65*	+7·94	+7·17	+6·16	+3·79	+3·10	+3·09	+2·44	-1·37	-3·90	-2·27
Aug.	-2·63	-2·96	-3·03	-3·77	-3·85	-5·80	*-7·77*	-7·39	-6·01	-2·88	+0·07	+4·61	+8·49	+10·34	*+11·59*	+9·33	+4·55	+3·16	+2·75	+0·01	-0·49	-1·14	-4·33	-2·85
Sept.	-4·24	-6·00	-7·02	*-12·62*	-3·64	-2·01	-1·30	+2·50	+1·40	+0·70	+3·58	+6·24	+7·80	*+9·30*	+6·42	+6·18	+1·62	+3·61	+3·34	-0·66	-2·60	-5·10	-4·82	-2·68
Oct.	*-8·01*	-5·03	-5·18	-2·93	-2·49	-0·71	-0·29	-2·07	-2·52	-2·65	+1·87	+4·75	+7·31	*+9·25*	+7·20	+7·81	+5·71	+2·65	+1·55	-0·29	-0·88	-5·47	-5·49	-4·09
Nov.	-4·54	-1·08	-2·06	-0·74	-1·08	-0·07	+2·70	+0·90	+0·18	-0·04	+1·94	+3·72	+4·58	*+5·84*	+5·42	+5·50	+3·78	+0·93	-1·60	-3·90	*-7·36*	-7·28	-3·42	-2·32
Dec.	-5·15	-4·11	-2·58	+0·79	+0·93	+3·23	+3·73	+3·43	+2·64	+0·49	+1·11	+1·97	+3·73	+3·81	+2·58	*+4·83*	+3·43	-1·31	-0·23	-2·89	-2·12	-3·37	-4·49	*-10·45*
Year	*-6·24*	-6·05	-5·89	-4·79	-3·46	-2·39	-2·56	-2·37	-1·59	-0·69	+1·39	+4·21	+6·47	*+7·99*	+7·55	+7·52	+5·41	+3·65	+2·89	+1·26	-0·71	-2·13	-5·16	-4·31
Winter	-4·21	-3·27	-4·84	-4·05	-3·15	+0·37	+2·32	+1·67	+1·29	+0 44	+1·38	+2·89	+4·45	*+6·10*	+5·51	+5·43	+3·93	+1·63	+0·47	-0·81	-3·44	-3·47	-4·75	*-5·89*
Equinox	-4·43	-4·85	-5·16	*-5·53*	-2·97	-2·78	-3·07	-2·83	-2·88	-1·40	+1·66	+5·01	+7·75	*+9·26*	+7·79	+7·23	+4·63	+2·89	+1·76	+0·13	-1·78	-3·85	-4·29	-2·31
Summer	*-10·07*	-10·03'	-7·69	-4·80	-4·26	-4·77	-6·93	-5·95	-3·19	-1·11	+1·13	+4·71	+7·21	+8·60	+9·33	*+9·90*	+7·69	+6·43	+6·45	+4·47	+3·08	+0·93	-6·43	-4·73

VERTICAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-32·9	-31·1	-34·8	-53·5	*-90·7*	-69·9	-82·3	-58·9	-28·6	-10·9	-2·3	+9·9	+12·7	+20·3	+29·6	+75·9	*+101·1*	+64·3	+56·5	+53·3	+35·2	+27·3	+23·1	-13·3
Feb.	-12·8	-9·6	-36·6	*-50·8*	-45·0	-33·5	-24·6	-19·4	-15·6	-10·6	-7·2	+10·0	+28·6	+22·8	+24·4	+21·4	+20·2	*+56·5*	+46·6	+47·4	+33·8	+17·2	-35·6	-27·6
Mar.	-25·1	*-32·4*	-25·9	-22·8	-25·0	-25·3	-16·0	-9·2	-8·3	-6·6	-6·3	-7·4	-0·5	+4·0	+14·5	+22·2	+33·2	*+45·5*	+39·6	+40·0	+36·3	+10·8	-16·1	-19·2
Apr.	-31·3	-41·4	*-67·3*	-49·1	-35·8	-27·5	-9·7	-5·4	-2·7	+0·3	-0·2	+0·1	+4·5	+11·2	+18·5	+24·9	+36·0	*+50·7*	+43·3	+32·6	+38·3	+21·5	+0·6	-12·1
May	-73·9	-47·9	-39·0	*-194·3*	-164·9	-91·7	-13·3	-6·7	+1·8	+9·1	+24·3	+38·7	+42·1	+71·7	*+110·6*	+84·3	+83·1	+75·7	+55·9	+36·3	+8·2	+15·3	-33·5	+8·1
June	-32·2	+13·8	*-73·1*	-20·6	+8·8	-16·2	-2·0	+4·0	+8·9	+10·0	+10·8	+6·8	+5·0	+4·0	+7·1	+11·0	+18·0	+23·6	+25·8	*+26·8*	+13·1	-6·6	-16·2	-30·6
July	-18·8	-46·1	*-59·0*	-41·8	-33·6	-37·1	-29·8	-13·4	+0·4	+2·1	+0·8	+1·6	+6·4	+18·7	+32·4	*+39·4*	+38·0	+37·9	+32·6	+26·6	+27·2	+22·1	-3·2	-3·4
Aug.	-18·3	*-21·2*	-17·7	-20·1	-12·7	-7·0	-6·1	-4·1	-4·5	-5·8	-8·1	-9·1	-5·3	-3·4	+4·7	+22·5	*+38·1*	+32·4	+23·7	+20·9	+15·9	+6·8	-1·1	-20·5
Sept.	-96·6	-123·3	*-135·1*	-103·4	-75·3	-49·9	-24·2	-8·3	+0·3	+23·0	+40·3	+51·3	+60·8	+63·7	+82·3	+91·0	*+103·9*	+96·3	+92·0	+61·7	+2·7	-20·8	-54·3	-78·1
Oct.	-46·9	-54·8	*-61·1*	-37·4	-13·8	-9·3	-6·2	+0·6	+4·3	+7·6	+8·3	+11·0	+15·1	+19·4	+31·9	*+44·6*	+39·0	+33·3	+37·8	+44·6	+10·9	-4·4	-17·3	-57·2
Nov.	-7·3	-15·6	*-36·3*	-30·5	-16·5	-9·2	-13·3	-9·3	-3·5	+1·0	+1·1	+2·7	+4·1	+5·6	+10·9	+13·3	+18·9	*+41·6*	+33·9	+30·9	+2·7	+2·8	-13·9	-14·1
Dec.	-36·6	-41·8	-54·0	*-63·8*	-59·2	-53·0	-36·8	-26·8	-17·2	-4·2	+5·2	+22·4	+25·8	+24·8	+48·8	+64·0	+74·4	*+78·0*	+57·4	+28·4	+18·4	+28·0	-24·6	-57·6
Year	-36·1	-37·6	-53·3	*-57·3*	-47·0	-35·8	-22·0	-13·1	-5·4	+1·3	+5·6	+11·5	+16·6	+21·9	+34·6	+42·9	+50·3	*+53·0*	+45·4	+37·5	+20·2	+10·0	-16·0	-27·1
Winter	-22·4	-24·5	-40·4	-49·7	*-52·9*	-41·4	-39·3	-28·6	-16·2	-6·2	-0·8	+11·3	+17·8	+18·4	+28·4	+43·7	+53·7	*+60·1*	+48·6	+40·0	+22·5	+18·8	-12·7	-28·1
Equinox	-50·0	-63·0	*-72·3*	-53·2	-37·5	-28·0	-14·0	-5·6	-1·6	+6·1	+10·5	+13·7	+20·0	+24·6	+36·8	+45·7	+53·0	*+56·5*	+53·2	+44·7	+22·1	+1·8	-21·8	-41·7
Summer	-35·8	-25·3	-47·2	*-69·2*	-50·6	-38·0	-12·8	-5·1	+1·7	+3·9	+6·9	+9·5	+12·1	+22·7	+38·7	+39·3	*+44·3*	+42·4	+34·5	+27·7	+16·1	+9·4	-13·5	-11·6

"Winter" comprises the four months, January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS SEASONS AND YEAR

The ranges are derived from the diurnal inequalities printed in Tables 6-8

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	All days			Quiet days			Disturbed days		
	H	*D*	*Z*	*H*	*D*	*Z*	*H*	*D*	*Z*
	γ	′	γ	γ	′	γ	γ	′	γ
Jan.	18·7	6·82	41·2	20·7	4·80	5·1	95·8	23·69	191·8
Feb.	28·8	7·97	32·6	24·5	5·77	13·7	57·3	13·13	107·3
Mar.	37·0	11·65	26·5	40·8	10·12	12·5	53·8	14·50	77·9
Apr.	62·8	13·60	37·8	60·5	12·66	18·3	102·2	16·97	118·0
May	120·5	13·74	83·3	61·6	14·25	25·1	454·9	36·62	304·9
June	84·7	14·40	49·3	57·6	11·68	16·6	308·8	24·32	99·9
July	64·9	14·07	34·4	57·0	13·86	17·0	71·8	14·62	98·4
Aug.	60·4	14·86	31·1	65·0	14·38	21·0	63·0	19·36	59·3
Sept.	55·6	11·01	67·0	44·2	11·17	13·8	147·5	21·92	239·0
Oct.	36·6	10·12	34·5	38·6	9·60	8·2	57·0	17·26	105·7
Nov.	22·8	8·29	34·7	20·0	5·31	5·6	27·5	13·20	77·9
Dec.	22·3	8·47	49·6	13·6	3·81	10·2	119·1	15·28	141·8
Year	45·1	10·01	39·2	40·1	9·46	10·9	97·4	14·23	110·3
Winter	19·8	7·54	36·1	18·3	4·08	5·6	51·3	11·99	113·0
Equinox	47·6	11·37	39·3	45·0	10·68	11·9	66·4	14·79	128·8
Summer	70·8	14·11	43·4	59·6	13·47	17·4	193·8	19·97	113·5

AVERAGE DEPARTURE OF DIURNAL INEQUALITIES FROM DAILY MEAN

Arithmetical average of diurnal inequalities in Tables 6-8 taken regardless of sign

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	All days			Quiet days			Disturbed days		
	H	*D*	*Z*	*H*	*D*	*Z*	*H*	*D*	*Z*
	γ	′	γ	γ	′	γ	γ	′	γ
Jan.	5·1	1·73	10·6	4·7	1·20	1·2	26·4	5·00	42·4
Feb.	5·8	2·30	8·7	5·7	1·68	2·9	11·0	2·68	27·4
Mar.	9·8	2·69	6·7	10·0	2·16	2·5	9·4	3·64	20·5
Apr.	14·6	3·16	8·5	15·9	2·97	4·4	20·4	4·58	23·5
May	31·4	4·55	19·0	14·4	2·99	6·2	137·1	8·19	55·4
June	20·5	4·30	9·9	14·3	3·34	3·6	53·0	6·55	16·5
July	14·7	3·74	8·2	14·1	3·44	4·0	19·3	4·38	23·9
Aug.	14·5	3·40	7·4	15·6	2·91	4·5	15·0	4·57	13·7
Sept.	12·7	2·95	16·1	11·7	2·48	3·4	33·4	4·39	64·1
Oct.	8·9	2·70	7·8	10·6	2·14	2·0	16·0	4·01	25·7
Nov.	4·9	2·09	8·2	4·5	1·37	1·2	6·8	2·96	14·1
Dec.	5·9	1·87	13·7	2·7	1·11	2·1	18·3	3·06	39·6
Year	10·1	2·83	9·7	9·9	2·22	2·6	24·7	4·03	29·2
Winter	4·8	1·93	10·1	4·2	1·31	1·5	12·5	3·16	30·3
Equinox	10·6	2·84	9·2	11·8	2·39	2·7	17·2	4·01	32·4
Summer	18·5	3·96	10·5	14·5	3·11	4·1	48·0	5·83	25·8

NON-CYCLIC CHANGE

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	All days			Quiet days			Disturbed days		
	H	*D*	*Z*	*H*	*D*	*Z*	*H*	*D*	*Z*
	γ	′	γ	γ	′	γ	γ	′	γ
Jan.	0·0	−0·01	+0·3	+4·1	+0·67	+1·6	−14·6	−2·35	+9·2
Feb.	+0·2	+0·03	−0·1	+0·9	−0·64	+2·8	−14·1	−3·65	−7·2
Mar.	+0·1	+0·01	−0·1	+3·3	+0·96	−0·1	−9·1	−0·89	−9·2
Apr.	+0·3	−0·01	+0·1	+2·9	+0·17	+0·5	−4·5	+3·26	+6·6
May	−1·0	−0·10	+1·0	+0·7	+1·30	+4·7	−15·2	−0·19	+30·9
June	+0·8	−0·14	−1·4	+5·2	−0·19	+5·3	−32·6	−1·25	−31·8
July	−0·2	+0·18	+1·0	+5·7	−0·22	−3·6	−17·7	+1·16	+7·3
Aug.	+0·4	−0·19	−1·1	+1·8	−0·15	+1·6	−12·9	−0·10	−14·8
Sept.	−0·2	+0·17	+0·3	+6·1	+1·47	+2·8	−22·7	−0·89	−22·7
Oct.	0·0	+0·01	+1·1	+2·4	+0·47	−1·2	−7·4	−1·97	−6·8
Nov.	−0·9	−0·43	−1·4	+2·5	−0·04	−2·2	−9·1	+2·07	−9·6
Dec.	−4·2	+0·06	−1·0	−2·1	+0·13	+1·3	−48·3	−2·89	−14·4
Year	−0·4	−0·03	−0·1	+2·8	+0·33	+1·1	−17·3	−0·64	−5·2
Winter	−1·2	−0·09	−0·5	+1·3	+0·03	+0·9	−21·5	−1·71	−5·5
Equinox	+0·1	+0·05	+0·3	+3·7	+0·77	+0·5	−10·9	−0·12	−8·0
Summer	0·0	−0·06	−0·1	+3·3	+0·19	+2·0	−19·6	−0·09	−2·1

AVERAGE RANGE OF DIURNAL INEQUALITY 1932-53 WITH 1967 AS PERCENTAGE OF THIS

12 LERWICK 1967

		All days			International quiet days			International disturbed days		
		H	*D*	*Z*	*H*	*D*	*Z*	*H*	*D*	*Z*
		γ	′	γ	γ	′	γ	γ	′	γ
Year	1932-53	49·4	9·36	53·3	37·4	8·68	10·3	131·6	14·22	131·1
	1967(%)	91	107	74	107	109	106	74	100	84
Winter	1932-53	24·4	7·87	41·1	15·1	4·65	7·7	85·0	13·84	116·6
	1967(%)	81	96	88	121	88	73	60	87	97
Equinox	1932-53	59·2	10·94	68·8	42·3	9·54	12·9	193·4	18·89	168·9
	1967(%)	80	104	57	106	112	92	34	78	76
Summer	1932-53	72·6	12·72	53·0	57·5	12·77	17·0	156·9	15·61	134·0
	1967(%)	98	111	82	104	105	102	124	128	85

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

RATIO OF RANGE OF INEQUALITY AT LERWICK TO THAT AT ESKDALEMUIR

13 LERWICK 1967

Type of day	Element	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
q	*H*	0·91	0·98	1·15	1·10	1·19	1·22	1·17	1·27	1·14	1·08	0·95	0·93
d	*H*	1·93	1·28	1·31	1·53	1·58	2·57	1·22	1·27	2·21	1·15	0·90	2·68
q	*D*	0·95	0·90	1·05	0·97	1·02	1·03	1·07	1·02	1·04	0·97	0·94	1·01
d	*D*	1·46	1·08	1·12	1·00	1·65	1·37	1·09	1·08	1·40	1·27	1·16	1·26
q	*Z*	0·75	1·27	0·61	0·85	0·79	0·73	0·67	0·64	0·68	0·51	0·82	1·50
d	*Z*	1·97	1·99	2·06	2·29	1·55	0·97	2·45	1·53	2·04	2·06	2·36	2·10

14 LERWICK 1967

(a) Disturbances without sudden commencement All times GMT

Serial Number	From		To		Range (γ)			Notes
	Date	Hour	Date	Hour	*H*	*D*	*Z*	
1a	2 May	20	4 May	04	1031	316	641	
2a	28 May	10	29 May	16	805	362	539	
3a	20 Sept.	14	22 Sept.	01	899	447	595	
4a	9 Oct.	20	10 Oct.	23	608	308	479	

(b) Disturbances with sudden commencement (ssc) All times GMT

Serial Number	Date	Time of sudden commencement	End of disturbance Date	Hour	With initial reversed stroke *H*	*D*	*Z*	Magnitude of main stroke (γ) *H*	*D*	*Z*	Range of following disturbance (γ) *H*	*D*	*Z*
								γ	γ	γ			
1b	7 Jan.	08 00	8 Jan.	18	No	No	No	+10	+5	+2	536	368	494
2b	13 Jan.	12 03	14 Jan.	10	Yes	No	Yes	+24	−10	+6	824	452	501
3b	7 Feb.	16 36	9 Feb.	01	Yes	No	?*	+13	−10	+2(?)	596	336	497
4b	15 Feb.	23 48	16 Feb.	23	No	No	No	+50	−24	−25		small	
5b	1 Apr.	08 07	1 Apr.	23	Yes	Yes	Yes	−5	+19	−7		small	
6b	4 Apr.	03 04	4 Apr.	20	No	Yes	No?	+17	−16	−9		small	
7b	1 May	19 07	2 May	01	Yes	Yes	Yes	+67	−14	−22		small	
8b	25 May	12 36	27 May	01	Yes	Yes	Yes†	(+83)	(+32)	(−35)	2466	1328	1415
9b	30 May	14 26	1 June	03	No	Yes	No	+39?	−20	−12	1010	452	537
10b	5 June	19 15	6 June	03	No	No	No?	+79	−26	−35	1210	724	919
11b	25 June	02 23	26 June	08	No	No	No	+19	−12	−6		small	
12b	26 June	14 59	28 June	04	Yes	No	Yes	+20?	−16	−8?		small	
13b	13 Sept.	03 45	13 Sept.	24	Yes	Yes	-	+7	−12	-		small	
14b	28 Sept.	05 36	30 Sept.	18	Yes	Yes	Yes	−17	−9	−2	754	276	448
15b	1 Dec.	18 24	2 Dec.	04	Yes	Yes	-	+14	−11	-	445	172	293

*Poor ssc at Lerwick.

†Multiple stroke, too rapid for analysis on magnetograms.

In the case of an ssc*, that is, an ssc preceded on at least one component by one or more small oscillations, timing of the sudden commencement has been made from the main stroke.

(c) Disturbances due to solar flare (sfe) All times GMT

Serial Number	Date	Commencement	Max.	End	Movement (γ) *H*	*D*	*Z*	*K*	*K'*	Notes
1c	30 Mar.	08 56	09 02	09 06	−3	+6	-	1	1	SEA SWF
2c	29 Aug.	13 30	13 35	?	-	−12	-	2	2	SEA SWF

SEA = Sudden enhancement of atmospherics

SWF = Short wave fade-out.

15 LERWICK 1967

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
Jan.	1/2	X	X	X	X	X	0	X	X	X	X	X	X	X	X	X	
	2/3	0	X	X	X	X	0	0	0	X	X	X	0	0	0	0	
	3/4	X	X	X	0	X	X	X	0	0	X	X	0	X	0	0	
	4/5	0	X	0	0	X	X	X	0	X	0	X	0	X	X	X	
	5/6	0	0	X	X	X	X	X	X	X	X	X	X	X	X	0	
	6/7	X	X	X	X	X	X	X	X	X	X	0	0	0	X	0	
	7/8		0	L	L	L	L	X	X	X	L	X	X	0	X		N(1)
	8/9		X	0	X	X	X	X	X	X	X	X	X	X	X		
	13/14		0	X	X	X	L	X	X	X	X	X	X	X	X		B,P,A,R(2)
	15/16		X	X	X	X	X	X	0	0	X	X	X	X	X		
	18/19		X	X	X	X	0	X	0	0	0	0	0	0	0		
	19/20		X	X	X	X	X	X	X	X	X	X	X	0	0		
	26/27		0	X	0	X	X	X	X	X	X	X	X	X	X		
	28/29			0	0	X	X	X	X	X	X	X	X	X	X		

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
Feb.	3/4			X	X	X	0	0	0	0	0	X	0	0	0		
	6/7			0	X	X	0	0	0	0	0	X	0	X	X		
	7/8			L	X	L	L	L	X	X	X	X	X	X	L		HP,HA,R(1 to 2)
	8/9			X	X	X	L	L	L	X	X	X	X	0			HP(1)
	9/10			X	X	0	X	X	X	X	X	X	X	X			
	11/12			X	X	X	X	X	X	X	X	X	X	0			
	13/14			X	X	X	X	0	0	0	X	X	X	X			
	18/19			X	0	0	X	X	X	X	X	X	X	X			
	21/22			X	X	X	0	0	0	X	0	0	X	X			
	23/24			X	0	X	X	0	X	0	X	0	0	0			
	26/27			X	X	X	X	0	X	X	0	0	X	X			
	28/1			X	0	0	0	0	0	X	X	X	X	X			

"In order to save space all nights during which the sky was overcast throughout have been omitted from the table; otherwise a symbol is given for each hourly observation during the hours of darkness according to the following code;"

L = aurora is observed
0 = observing conditions are good and aurora is clearly absent
X = observing conditions made a decision about the presence of aurora impossible
? = aurora is suspected but observing conditions are not good enough for a firm decision.

15 LERWICK (contd) 1967

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
Mar.	1/2			X	X	O	X	X	X	X	X	X	X	X			
	2/3				O	O	X	X	X	X	X	X	X	X			
	4/5				X	X	X	O	X	X	O	O	O	O			
	5/6				O	O	O	X	X	X	X	X	X				
	6/7				X	X	X	O	X	X	X	X	X				
	8/9				X	X	X	X	X	X	O	O	O				
	10/11				O	O	O	O	O	O	O	O	O				
	12/13				X	O	O	O	O	O	X	X	O				
	15/16				X	X	X	X	X	X	X	X	O				
	18/19				X	X	X	X	X	X	X	X	O				
	21/22					X	O	X	O	X	X	O	X				
	22/23					X	X	X	X	X	O	O	O				
	23/24					O	O	O	O	X	O	O	O				
	25/26					X	O	X	X	X	X	O	O				
	26/27					O	X	O	O	X	O	O	O				
	27/28					X	X	X	X	O	X	X	O				
	28/29					O	O	O	O	X	X	X	X				
	29/30					X	X	O	O	O	O	O	X				
	30/31					O	X	O	O	X	O	O	O				
	31/1					O	O	O	O	O	O	O	O				

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
Apr.	2/3					X	X	X	O	O	O	O					
	3/4					X	X	X	O	X	O	O					
	6/7					X	X	O	X	X	X						
	7/8					X	X	O	O	O	O						
	8/9					O	O	O	O	O	O						
	11/12						X	X	X	O	X						
	12/13						O	X	X	X	X						N(1) 22h 10m
	17/18						X	X	X	O	O						
	21/22						X	O	O	X	X						
	28/29						X	O	O	O	X						

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
May	3/4							L	O	O							A,P(1 to 2)

When aurora was observed a brief note has been added describing the structure, form and brightness according to the following code:-

Structure. H = homogeneous
S = striated
R = rayed

Form. A = arc
B = band
P = patch
V = veil
R = rays
N = not identifiable

Brightness Index. 1 = comparable with Milky Way
2 = comparable with moonlit cirrus cloud
3 = comparable with brightly moonlit cirrus cloud or moonlit cumulus cloud
4 = much brighter than 3

Complete definitions of these terms are given in the International Auroral Atlas (1963).

15 LERWICK (contd) 1967

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
Sept.	3/4						X	X	X	O	X						
	4/5					X	X	X	X	O	O	X					
	5/6					X	?	X	X	X	X	O					
	7/8					X	X	X	X	X	X	O					
	14/15					X	X	O	X	O	X	X					
	21/22					O	X	X	O	O	O	X					
	25/26				O	O	O	O	O	O	O	X	O				
	27/28				O	O	O	O	O	X	X	X	X				
	30/1				X	X	X	O	L	O	O	X	X				N(1)

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
Oct.	1/2				X	X	X	X	O	X	O	O	O				
	2/3				X	X	X	X	X	X	O	O	O				
	4/5			X	X	X	X	X	X	X	X	X	O	O			
	5/6			X	X	X	O	O	X	X	X	X	X	X			
	6/7			X	O	X	X	X	X	X	X	O	O	O			
	7/8			O	O	O	X	X	X	X	X	X	X	X			
	8/9			O	O	O	L	L	X	X	X	X	X	X			N,A,R(1)
	9/10			X	X	X	L	L	L	L	L	L	X	X			N,A,R,B(1 to 2)
	10/11			O	O	L	L	O	O	O	X	X	X	X			N.A.B.R(1)
	11/12			X	O	O	O	O	L	L	L	L	L	O			N(1)
	12/13			O	O	O	X	X	O	O	X	X	X	X			
	13/14			X	O	O	X	X	X	X	X	X	X	X			
	14/15			X	X	X	L	X	X	X	X	X	X	X			N(2)
	15/16			X	X	X	X	X	O	X	X	X	X	X			
	17/18			O	X	X	X	X	X	O	O	O	O	X			
	20/21			X	O	O	O	O	X	X	X	X	X	X			
	21/22			X	X	O	X	X	X	X	X	X	X	O			
	24/25		X	X	X	X	X	X	O	X	X	X	X	X	X		
	25/26		X	X	X	O	O	O	X	X	X	X	X	X	X		
	26/27		X	X	X	O	X	X	X	X	X	O	X	X	X		
	27/28		X	X	L	L	L	X	X	X	X	X	X	X	X		P(1)
	30/31		X	X	O	O	X	O	O	O	O	O	O	O	X		
	31/1		X	O	O	O	O	O	O	O	X	X	O	X	X		

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15 LERWICK (contd) 1967

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
Nov.	1/2		O	O	X	L	X	X	X	X	X	X	X	X	X		N(1)
	4/5		X	X	X	X	X	O	O	O	O	O	O	O	O		
	7/8		X	O	O	O	O	X	O	X	X	X	X	X	X		
	9/10		X	X	X	O	O	O	O	O	O	O	O	O	O		
	11/12	X	O	X	X	X	X	X	X	X	O	X	O	O	O	O	
	12/13	X	X	X	X	X	X	O	O	X	X	O	O	O	X	X	
	13/14	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	
	15/16	X	X	O	X	X	X	X	X	X	O	O	O	O	X	X	
	20/21	X	X	X	O	O	O	X	X	X	X	X	X	X	X	X	
	22/23	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	
	25/26	?	O	O	L	L	L	L	L	O	O	O	O	O	O	O	N(1)
	26/27	O	O	O	O	L	L	L	X	X	X	X	X	X	X	X	A,N,B(1)
	28/29	X	L	L	L	L	L	L	L	O	O	O	O	O	O	O	A,R,P,B(1 to 2)
	29/30	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	
	30/1	X	X	X	X	L	X	X	X	X	X	X	X	X	X	X	N,RA,(1 to 2)

	GMT	17	18	19	20	21	22	23	24	01	02	03	04	05	06	07	Notes
Dec.	1/2	X	X	X	X	X	X	X	X	X	X	L	X	X	O	O	N(1)
	4/5	X	X	X	X	X	X	X	O	X	O	O	X	X	O	X	
	5/6	X	X	X	X	L	L	X	X	X	X	X	X	X	O	O	N(1)
	6/7	X	X	X	X	L	L	L	L	L	X	X	X	X	X	X	N(1)
	9/10	X	X	X	X	O	X	O	O	O	O	X	O	O	O	O	
	14/15	X	X	X	X	X	X	X	X	X	X	X	O	X	X	X	
	15/16	O	X	O	O	X	O	X	X	X	X	X	X	O	X	X	
	16/17	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X	
	17/18	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	
	18/19	X	O	X	X	O	X	O	O	O	O	O	O	O	O	O	
	19/20	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	
	25/26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	
	27/28	X	X	X	X	O	O	O	X	X	X	X	X	X	X	X	
	28/29	X	X	X	X	X	O	X	X	O	O	X	X	X	X	X	
	29/30	X	X	X	X	X	O	X	O	O	O	X	O	X	O	X	
	30/31	?	L	L	L	L	X	L	X	X	X	L	L	X	L	L	N(1 to 2)
	31/1	L	L	L	L	L	L	L	L	L	L	L	L	L	O	O	N,B,A,R,V,C,P(1 to 3)

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DATE	Φ_1	FORMS	TIME	Φ_2	DATE	Φ_1	FORMS	TIME	Φ_2	DATE	Φ_1	FORMS	TIME	Φ_2
JANUARY					JUNE					OCTOBER (contd.)				
7-8	54	HB,RA,RB,P	1705-0700	61	5-6	54	RA	2230-0200	59	11-12	61	N	2350-0400	
8-9	59	HA,HB	1750-0200	64	6-7	57	N	2250-2350		12-13	63	R	1832-1850	
13-14	54	HA,RA,RB	2000-0640	60	14-15	59	N	0050-0200		14-15	62	N	2205-0050	
14-15	62	N	0250-0500							27-28	60	N,P	2020-2250	
15-16	61	N	2130-2300							28-29	55	HA	2045-2345	
			0100 and							29-30	60	N	1850-2300	
			0250-0500											
					JULY									
					11-12	58	N	2300						
FEBRUARY					13-14	58	N	2145-2200		NOVEMBER				
4-5	59	N	2100-0300											
7-8	53	HA,HB,RA,RB	1830-0600	59						3-4	58	N	1950-0300	
8-9	59	N,P,R	1950-0200							4-5	61	N	2250-0200	
23-24	59	HA,R	1835-2100		AUGUST					7-8	61	N	0050-0350	
										21-22	58	N	1845-0030	
					30-31	58	N	1945-0005		25-26	63	N	1800-2400	
					31-1	58	N	1920-0015		26-27	62	N	1950-2130	
MARCH										28-29	59	HA,RA,RB	1750-0200	
										29-30	62	N	2150-0100	
19-20	58	N (cloudy)	2300-0015							30-1	58	HA,R	1920-0520	65
23-24	59	N	2100											
27-28	58	N	1830-2305		SEPTEMBER									
30-31	61	N	2250-2400											
					1-2	62	N	2350						
					8-9	61	N	2350		DECEMBER				
					21-22	57	HA	2230						
APRIL					28-29	56	N (cloudy)	1830-0250						
					29-30	58	HB,RA	1950-0300		1-2	56	HA,RA,RB	1745-0530	65
1-2	59	HA	1930-2300		30-1	63	N	2350		2-3	61	N	2250-2350	
11-12	61	N	0050							3-4	61	HA,R	1950-2045	
										5-6	59	HA	2050-0010	
										6-7	59	HA	2045-0550	
										8-9	62	N	1950	
MAY					OCTOBER					19-20	56	RA	2130-2230	
										21-22	59	N	1715-2310	
1-2	58	N	2045-0200		2-3	59	R	1945		22-23	60	N	2350-0100	
2-3	56	RA,RB	2150-0500		3-4	60	N	2050-2250		23-24	61	HB	2350-0150	
3-4	59	RA,P	2200-0100		8-9	61	N	2050-2200		28-29	59	R	0050	
25-26	<50	HA,HB,RA,RB,P_2	2245-0255	54	9-10	58	HA,RA,RB	1950-0500	65	30-31	59	RA	2245-0600	
26-27	55	HA,HB,R	2245-0115	61	10-11	59	HA,HB,RB	2005-2230		31-1	57	HA,HB,RA,RB,P	1700-0600	63

The above table was compiled in the Balfour Stewart Auroral Laboratory of the University of Edinburgh from all data available for the sector between geomagnetic longitudes 70° and 90°E., using mainly observations made at British Meteorological Office stations and by British voluntary observers on land and in ships and aircraft, but including also data from Iceland, Faroes, Ireland and France. Acknowledgment is made to the authorities in these countries responsible for the organization and collection of observations.

In the table, Φ_1 is the lowest geomagnetic latitude from which aurora was seen in the longitudes considered.

On any night, if more than a glow on the northern horizon was seen from the British Isles, the other forms reported are listed and the period of time (GMT) during which the display was observed from the British Isles is stated.

The standard abbreviations used are those defined in the International Auroral Atlas, (1963). The system of reporting defined therein came into operation on 1 January 1964.

N denotes an aurora, the form of which is not identifiable because of adverse observing conditions. It includes the glow on the horizon, since this is the upper part of a display, the identifiable portion of which is below the horizon.

HA = homogeneous arc; RA = rayed arc; HB = homogeneous band; RB = rayed band; R = isolated rays; P = patch of diffuse luminosity. The two types of pulsing of auroral forms described as pulsation and flaming are designated by the symbols p_1 and p_2 respectively.

Under Φ_2 is given the lowest geomagnetic latitude in which aurora was situated overhead in the longitudes considered. In the absence of direct visual observations Φ_2 is deduced from measurements of elevation made in other latitudes, assuming a height of 100 km for the lower edges of arcs and bands.

Because of varying observing conditions, these data are in some cases incomplete; aurora may have been overhead in latitudes lower than those listed and other forms may have occurred. Fuller details may be obtained from the laboratory on request.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·69 — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1		130+						110+	105+	105+															
2					105+	105+											150+								
3							130+					105+											150+	110	
4	125							155+		155+	130	130	120	120	170	170	150	140	130	150	130	130+			
5		80		80+	90+				105		110	120	125	125	130	135	130	135	120	120	110	120	110	95	
6	55	70	70	65	80	80	80	125	140	190	160			210+					485	650	470	310	185	175	
7			105	135	110			100						190	270	195	225	200	225	210	200	165	110	95	
8				120							95	105	130+		210+			205	205		140	130	105	95	
9	100	65	60		80+				155+																
10	85+	100+	105	95	80	80+	75+			70										100+			95+		
11		80+								95	80	80				95	100			120	95	95	105		
12			80+				140+	140+			110		120	105	105	105	100	120+	145+					155+	
13							120+	120+	95+	90+	105+	120+	140+	165+	185	105	135	140	130	110	105	95	105		
14																									
15												130+	155+	150	140	155+	160+	155+	140	185	170	155	190	195	
16	195	165	175	190	155	95+																		210+	
17	235+	295+	210+	340+	565+	565+	485+	340+	190+	170+	200+	230+	225+	295+	285+	260+	235+			95+					
18											200+	260+			220+							105	125	95	
19	95	90	80	95	95	105	140	130	175	120	110+	120+	130+												
20				555	470	380+	355+	390+	565+	600+	530+	460+	510+	510+	340+										
21								340+	260+																
22																									
23						165+	150+	160+	150+	140+						140+									
24																					175+	195	165	155	
25	140	140	130+	125+	125+	135+		135+	130+	135+		140+	80+						135+	110+	175	165	165	140	
26	135+	125+	120+	130+						190+	190+	210+	155		165	125	140+				195+	145+		105	
27	80	90	80	75	75	80	100	95	100	100	130	120	120+	110+	125+										
28	355+	470+	310+	125+		125+	135+	150+	140+	130+			105	120	125	155	165	235	320+	365+		395+			
29	280+	270+					140+	105+	120+	95+															
30											95+				80+	140+	170+	120+	140+	135+	155+	130+	120+	105+	
31			90+	80+	65+	120+	200+	235+	200+	250+	225+														
Mean	157 (12)	155 (14)	124 (13)	158 (14)	161 (13)	170 (12)	173 (13)	177 (16)	175 (15)	165 (16)	165 (15)	166 (14)	163 (13)	191 (11)	182 (14)	148 (12)	155 (12)	161 (9)	198 (11)	196 (12)	177 (12)	167 (14)	133 (13)	133 (13)	165
Fair Weather Mean	113 (7)	100 (7)	96 (7)	166 (8)	152 (7)	88 (3)	107 (3)	113 (4)	130 (4)	115 (5)	116 (7)	111 (5)	125 (5)	135 (6)	161 (8)	136 (8)	144 (7)	176 (6)	205 (7)	221 (7)	177 (9)	153 (10)	137 (10)	126 (10)	138

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·70 — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1																	225+								
2						110+	110+	135+				160+			140+			200+			200+	205+	140		
3																					185+				
4	165+	190+		120+	125+		130+					175+	210+		220+	210+	225+	235+							
5								125+	130+	155+	160+	150+	140+	110+											
6												140+	140+		210+	140+	135+	135+	140	135	125	120	100	95	
7	80	70			80		80	75	100+	105			120+	130+	145+	125	110+	110	130	130	120	110	100	100	
8	95	95	95	100	100	120	110	105	105	120	120	130	125	130	125	135	155							120	
9														135+	140	130	125	165	170	175	210	130	120		
10			95	105				110	120	110+	120+		155+	160+	155	155	175	160	155	155	135	130	125	190	
11	235	165	200	175	200	130	105	105	165	225	210	205+	165+	135+	230+	235+	170	205	205	255+	265+	280+	260+	225+	
12	270+	295+	260+	215+	200	190	190	190	190	165	155	140+	120+	130+	140+	145	175	225	175	140	135	105	120		
13	110	235	210	200	210	220	205+	190+	200+	165	190	235	295	310	280	330	390	470	375	365	330	320	250	200	
14	165	155	140	140	155			165+	135+						195	210	210	210+	225+	225+	225+	210+	200+	200+	
15	170+	190+	175+	165+	180+	190+	180+	190+	200+	165+	190+	205+	190+	190+	200+	225+	200+	190+	215+	225+	250+	260+	235+	195+	
16	200+	140+	130+	165+	190+	155+	155+	140+	160+	140+	130+					155+	175+								
17					165+	185+	165+	190+	175+					200+	175+	195+									
18													200+	175+					250+	320+	295+	295+		235+	
19	210+									270+		295+		235+	225+	270+	340+	210+	235	355					
20					225+	160+	80	140	170	190			165+			135+	155+								
21							120+					125+		120+			210+	120	140	160	155				
22	120	100	105	95	125+																				
23	175+	95+	95+				225+					120+	110+						130+	140+				100+	
24				90	80	95	90	95	100	125	130	130	130	130	145	140	160	150+	155+		200+	200+	200+		
25							145+																		
26					260+				165+								140+				110+		100+	80+	
27	125+							95+	120+	120+	140+									165+			120+		
28										45+												165+			
Mean	163 (13)	157 (11)	151 (10)	143 (11)	164 (14)	155 (10)	139 (15)	137 (15)	149 (15)	150 (14)	155 (10)	170 (13)	162 (14)	168 (14)	182 (15)	183 (16)	193 (18)	199 (14)	193 (14)	210 (14)	196 (15)	195 (13)	159 (13)	158 (11)	168
Fair Weather Mean	134 (6)	137 (6)	141 (6)	129 (7)	146 (7)	151 (5)	109 (6)	117 (7)	142 (6)	156 (7)	161 (5)	165 (3)	183 (3)	190 (3)	173 (6)	171 (8)	195 (8)	208 (7)	192 (9)	202 (8)	173 (7)	153 (6)	136 (7)	141 (5)	159

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·65 — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1																140+									
2		115+									115+	105+	125	115+						140+	140+				
3						155+	185+	160+				210+	195+	185+	160+		175+	210+							
4		150+	120+	150+	155+					100+					135+	160+	185+	220+	195+	190+	195+	195+	160+	150+	
5	140+	115+	140+	145+	140+				120+			175+	150+	150+	160+	160+				175+	175+	150	135	125+	
6						105+	120+	125+										160+						125+	
7	105+	110	110+						175+		245+			265+	290+	350+	380+	370+	325+	350+	370+	325+	290+	290+	
8	280+	270+	280+	280+	195+	175+	170+	170+	155+							195+									
9			80+	75+	70	80	80	105	100	115	85	115	140	145	135	150	155	135	125+	120+	120+				
10										115+	95+	100+	115+	150+	175+	210+			225+				140+	150+	
11	145+	115+	115+	115+	140+	195+						120+	140+												
12					80	80	95	105					160+			150+			125	135	125	110	115	105	
13	105	100	75	100	80	80	75	57	100	115	120	120		140+			145+							100+	
14	105+	100+													175+	180+									
15						120+	160+																		
16		85+	80+	80+	75+							85+	95	100	125	135	125						115+		
17											175+							150+							
18										75+	85+	105+	115	115	125	135	145	150	160	145	135				
19				100+									125+							105+			125+		
20												110+	125+												
21												105+	140+	150+	140+	125+			115+	155+			150+		
22									95+	105+									105						
23					140+							105+	150+			200	205+			175+		125			
24			105	95	85	80	80	155	140	100+															
25				120+	115+	120+	120+	125+	125+					170+	160+	190+					150+	175+	135+	145+	
26	125	115	170	115	115	115	120	110	110	115+	125+	135+	140+	125+	150+	160+	185	190	200	315	335	245	290	210	
27	150	380	265	150	130	145	190	325	280	150	125+	140+	140+	140+	140+	115+	140+	160	185	230					
28	175+			145	135				105			150	145	160+	230			265+	350	–	–	–	–	–	
29	–	–			–						95+	105+	115+					145+	175	155	140	110	110	140	
30		105								135+			125+						120	120	120	115		85	
31				75				105+											150	160	135	120	140	100	
Mean	148 (9)	147 (12)	140 (11)	125 (14)	118 (14)	121 (12)	127 (11)	142 (11)	137 (11)	113 (10)	127 (10)	124 (16)	136 (18)	150 (14)	164 (14)	172 (16)	184 (10)	196 (11)	183 (14)	178 (15)	178 (12)	167 (10)	159 (12)	144 (12)	149
Fair Weather Mean	127 (3)	162 (5)	154 (4)	113 (6)	99 (7)	97 (6)	107 (6)	146 (6)	139 (6)	127 (3)	103 (2)	128 (3)	124 (5)	120 (3)	154 (4)	155 (4)	153 (4)	159 (4)	174 (9)	194 (7)	165 (6)	139 (7)	158 (5)	128 (5)	139

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·62 — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	130	115	120	120	105	90	90	110	100	90	115	125+	130+	150+	185+	180+	160+	155+	125+						
2							145+	120+	90+	80+	90+	115+	150+	195+	130+	155+	130+	145+	150+				125+	130+	
3	185		90	100	205				160			115+													
4			75	65			70	70	90	75															
5					70+																				
6												125+	160+	140+		170+		165+							
7					115+		90+	105+	125+	125+	140+	130+	130+	155+	180+	155+	160+	180+	180+	185+	185+	160+	145	105	
8	90	80	70	65	65	75	90	105	105	125+	145+	150+	155+	160+	160+	165	180	160	205	165	185	170	145	125	
9	100	90	90	90	90	110+	90+	90+	100	100	105	125	125	115	125	125	130	140	120	140	115	105	100	105	
10	85	85	75	75	70	75	90	110	105	115	115	110	140	120	125	150	150	185	150	125	140	140	100	55	
11	75	80	70	70	80	75	80	105	105	110		80	65	75	90	55	80+		100	110	140	130	125	115	
12	100	85	80	80	55			80	75	85	100	115+		125+	105+	85+	125+	140	125	140	100	35	75	70	
13	70	75	65	70	80	85	105	85	90	120	140	130	120	125	120	125	140	150	150	160	120+	130+	130+	120+	
14	110+	90+	105+	120+	140+	160+	160+	160+	160	150+	165+	145+	150+	160+	160+	185+	170+	170+	185+	190+					
15						105+	100	105	100			125+			110	85	105	130	150	160	120	90			
16			50+	80+	85+																150+		110+		
17		105+	105+																110+	90+					
18		120+	110+	100+	130+		125+						115+	125+				140	150	120	125	115			
19																									
20					105+	115										80					220+	310+			
21																							200+	195+	
22					105					120+	125+	125	120+	125+	145	130	125	130	125	125	125	145	150+		
23				100+									125+	125	120	150	195	155	120	125	125	125	130	125+	
24	115+	125+	115+	110+	115+	105+	105+	105+								195+									
25	150+	125	115	110	125	120	125	140	125	125	130	125+	130+	140+	155+	165+	195+	200	195	195	240	195	155	110	
26	115	125	85	85	140+	130+	240+	190+	185+	160+			175+	155+	150+	225+	265+	335+	380	355	390	450	290	240	
27				85+	100	105	130	125	120	115	115	120	140+	130+	140+	125+	115+								
28					130+				150+	160+	165+	160+	130+	150+	160+	130+	140+	150+	140	140	130	130	120	115	
29	120	110	100	80	70																				
30																165+	175+	155+	150+	150+	125	120	100	105	
Mean	111 (13)	101 (14)	89 (17)	89 (18)	104 (21)	104 (13)	115 (16)	113 (16)	117 (17)	116 (16)	127 (13)	125 (17)	133 (17)	137 (18)	139 (17)	143 (21)	152 (18)	166 (18)	158 (19)	157 (17)	161 (17)	159 (16)	137 (16)	123 (14)	128
Fair Weather Mean	107 (10)	97 (10)	86 (12)	84 (12)	96 (12)	93 (8)	98 (9)	103 (10)	110 (13)	104 (9)	117 (7)	115 (6)	113 (4)	112 (5)	119 (7)	118 (9)	146 (7)	153 (10)	162 (13)	158 (13)	158 (13)	150 (13)	135 (11)	115 (10)	119

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·62 — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	105	105	125	115	100	100											265+							345+	
2	255+					175+		150+	185+										160	175	120+				
3			105	110	110	120		125	150	140	125	125	115	130+	125+	125	145		195	200			150	195	
4	175		160	160	150	125+	110		140	100+	90+	80+	115+	160+	160+	160+	160+								
5																	205+	230+	190+	125+	160+	130+	115+	100+	
6	140+	140+	150+	185+	185+	195+	195+	205+	205+	200+	195+	195+	205+	220+	220+	220+	220+	185+	175+	175+	180+	165+	160+	200+	
7						100+				105+			110+	120+	120+	100+									
8															230+	265+	290+	150+	230+	405+	405+	550+	830+	635+	
9	505+	600+	600+									15+	15	10+	35+	80+	90+	145+							
10									100+	105+	90+	100+	110+	115+	110+	120+			125+	185+	195+	160	165	155.	
11									180+	195+	240+	240+	205	265+									150+	45+	
12	65+	55+							45+	45+	35+	80+	125+	160+	175+	155	100	70	80	65	70	90	30	70	
13	50	70	45			25	35	45+	80+	85+	100+	105+	85+	85+	115+	100+	90	115	120	115	100	100	90	75	
14	70		15		40	80	90	120	170	155	160	150+		110	170	155	175	165	190	180	155	140	110	115	
15	100	80	85	85	90	100	110	105+	105+	100+	85	85	100	105	145	130	125	100+	85+	100+	105+	100+	90+	80+	
16	55+	80+	70+	80+	75+	85+	105+	105+	105+	115+	140+		55+	45+	90+	130+	125+	120+	110+		105+				
17				90+	90+											120+	120+	105+			120	125	110	105	
18	110+							105+	120+	120+								140+	140+		125+	115+		70+	
19	80+	110	110	70	70	80	105	105	125									115	115	130	145	155+	145+	150	
20	145+	140	120	115	120+			125+	125+	120	125+	130	220	290	335	345+	550+	530+	610+	655+	450+	335+	355+	300+	
21	255+	240+	230	180	175	140	165	195	120	140	130	125	145	185	220	300	335	390	370	470+	355+	320+	370+	125+	
22								345+	275+	255+	275+	300+	435	505	485+	485+	450+	425+	470+	470+	380+	345+	240+	220+	
23					195+	195+	185+	160+	185+	195+	150+			240+	240+	265+	310+	345+	355+	380+	390+	310+	290+	255+	
24	230+				205+	195+	230+	265+	240+	230+					195+	195+	180+	205+							
25		240+	230+	240+	265+												255+	240+	255+	240+	205+	255+	255+	300+	
26	230+	290+	345+	345+	275+	275+	290+	290+							265+	310+	355+	435+							
27	320+	335+	415+					575+	805+	770+	760+	460+	380+	495+											
28																									
29																									
30																									
31								105+	120+	110	125+	110	110	90	105	100	85	100							
Mean	170 (17)	191 (13)	187 (15)	148 (12)	143 (15)	133 (15)	147 (11)	184 (17)	179 (20)	173 (19)	177 (16)	153 (15)	158 (16)	185 (18)	186 (19)	193 (20)	220 (21)	215 (20)	221 (18)	254 (16)	209 (18)	212 (16)	218 (16)	188 (18)	185
Fair Weather Mean	100 (5)	101 (5)	111 (9)	119 (7)	105 (7)	92 (7)	103 (6)	136 (4)	157 (6)	133 (5)	125 (4)	115 (5)	168 (8)	214 (6)	195 (5)	161 (6)	151 (7)	159 (6)	176 (7)	144 (6)	118 (5)	123 (5)	98 (5)	118 (6)	134

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·59 — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1														105	160+	185+	125	140	115	125	110+	110+	90+	80+	
2	90	90	100	100+	105+	105+	80	90	120+	130+	125+	90+	115+	150+	90+	140+									
3								255+	180+	115+	160+			150+	100+	85+	90+	115+	175+						
4				175+				120+					70+		115+	120+	115+	125+	140+	130+	120	110	85+	100+	
5	105	110	105	110	115	110	115	115	115+	110+	125+	125+	185+	195+	160	205	345						180+	155+	
6	145+	150+	140+								115+		120+	125+			145+	150+	170+	150+	140+				
7		125		120	125	160	150				115+						145+	150+			195+	175			
8	140	115	110	105		115	115+	110+	120+	120+	120+	130+	130+	125+	145+	130+	115+	125+	85			85+		70+	
9									160+			155+	145+	70+	125+	125+	125+	120+	140+	155+	140	130	140	105	
10	105	90	80			80	90	75					85+	115+			115	150	115	115	105	110	105	90	
11			90	80	75	80	90	80	100	110	100	80	80	85	100	110	120	115	105	105	90	90	120	120	
12	120	85	100	90	110	130	155	160	155	145	130	125	140	130	205	195	205	190	195	205	220	165			
13			105+	110+	105+	150+	115+	125	150	140	175	155	140	105	105	115	150	125	85	100	105	70	85	70	
14	105	80	70							115+	70+	45+	90	85	85	115	120	150	115	175	155+	130+	140	125	
15	80	85	85	70	80	80	100	110	160	180	230	175	115	90	90	110	150	140	175	195+	175+	230+	205+	215+	
16	175+	200+	205+	240+	220+				195+	185+	195+	160+	125+	150+	150+	160+	160+	160	155	150	160	160	150	145	
17	125	115	120	115	115	115	105+	105+	90	90+	105+	110+	105	115	125	145	150	150	155	150	140	170	145	230+	
18	150+	115	100				55	165+			100+	150+	195+	165	145	145	140	130	140	140	145	145	160	150	
19	175+		140+			220+	155+	45+			110+		115+	120	90+	90+			220+	180	160+	120+	115	105	
20	115	140	140	130	150	160+	145+	290+																	
21	105+	115+	115+	140+	170+						150+	160+	140+	140+	155+	115+			130+	140+	155+	150	185	290	
22	220										105+	90+	110+	110+	105+	145+	145+	150+	255+						
23		125+			105+	125+	140+				105+					145+	150	145	150	155	155	160	175	145	
24	140	125	115+	115+	125	160	265	165+	160+	165	185	205	195+	45+	140+					125+					
25																									
26					105+	100+	110+	160+	160	140	80	140	175	175	160	160	150	125	155	175	160	165	155	165	
27	180	150	150	150	155	150	155	150	155	145	115+	115+	150+												
28																			185+		150+				
29		180+	160+	160+	180+	155+	160+		130+	130+	110+	115+	105+	120+		125+	125+	140+	175+	140+		130+	110+		
30												65+	105+	105+			115+	85+			145+		75+		
Mean	134 (17)	122 (18)	117 (19)	126 (16)	127 (16)	129 (17)	128 (18)	136 (17)	143 (15)	135 (15)	128 (22)	126 (19)	128 (23)	121 (23)	127 (20)	136 (21)	145 (22)	137 (21)	152 (22)	148 (19)	146 (20)	137 (19)	136 (19)	140 (18)	133
Fair Weather Mean	127 (12)	110 (13)	104 (12)	108 (9)	117 (9)	118 (10)	125 (10)	113 (8)	139 (7)	146 (7)	150 (6)	147 (6)	121 (7)	117 (10)	131 (9)	144 (9)	160 (12)	143 (12)	134 (13)	148 (12)	140 (11)	138 (13)	141 (13)	139 (12)	132

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·62 — JULY 1967

volts per metre

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
1			160+	230+	240+	220+	160+	150+	155+		275+	300	265	155	195	240	285+	405+	690+						
2											205+	230+	195	190	165	300	285	320	240	240+	285+	240+	160+	200+	
3	255+							380+	255+			415+	405+	380+	380+	390	435+				170+	240+	265+	230+	
4	230+	208+	160+				175+	160+	145+	140+	140+	160+			150+	150+	140+	105	150	150	150	160	125	105	
5	105	110+	115+	125+	130+	120+	80+	90+		90+	125+	115+	150+	150+	125+	185+		230	160	140	160+	170+	190+	185+	
6													320+	390+	300+	290+	290+	275+	380+						
7														390+	495+	470+	510+	460+	830+	940+	770+				
8									265+	170+	230+	165+	165+	185+	240+	170+	185+	205+	170+	205+	160+				
9			150+					195+	140+														140+		
10												160+	125+	140+			125+	125+			150+	150+			
11						195+	170+	170+	165+	160+	160+	150+	155+	145+	150+	140+	150+	150+	165+	165+	180+	170+	170+		
12			45	70	90	55	90+	125+	115+	110+	125+	125+	120	120	130+	115+	110+	125	150	160	160	155	150	115	
13	115	115	110	55	50	80	115	115	85						105	150					160+	170+	170+	160+	
14	140+	115	110	115	110	125	125	120	130+	170+	155+	155+	165	160	185+	145+	140+	170	190	185	155	155	150	140	
15	125	125	130	130	140	125	130+	150+	145+	140+	140	125	170+	130+				115+	115+	120+	145+	170+	170+	130+	
16	140	90	45				80	100	90		115+	140+													
17																									
18																									
19														690+					390+	265+		185+			
20			265+	220+	195+	160+	140+							140+	140+	165	165	155	150				160	155	
21	150	140	145		125+			185+	185	170+			115+	115	100+	90+									
22		150+	120	115	170	205	160		125+												345+	355	230	130	
23	110	115	115	115	130	205	320	230	150+	170+	230+		205	230	170	160	170	220	265	290	275+	255+	435+	370+	
24	220+	240+	345+	435+			450+						345+			150+	90+	145+	115+	105+	115+	115+	85+	100+	
25										125+	105+	90+	70+	80+											
26																				195+		170+	180+	140+	
27	150+	125+	100+	115+	125+	140+			105+	115+	115+	105+	90+	70+			90+	110+	110+	105+	115	125	125	120	
28	115	100	100			115			140+	125+	140+	185+	195+		150+	165+	160+	150+	155	130+					
29	70+	115+	140+							150+	140+	150	160+	160+	160+	160+	255	275	345+	320+	320+	150+	170+	195+	
30																			335+	265+					
31		300+	355	265+	230+	220+	115	185		170+					165+	140	140	140+	170+	130	140				
Mean	148 (13)	146 (14)	151 (18)	166 (12)	145 (12)	151 (13)	165 (14)	168 (14)	150 (16)	143 (14)	160 (15)	173 (16)	190 (18)	212 (19)	195 (18)	199 (19)	207 (18)	204 (19)	264 (20)	228 (18)	220 (18)	184 (17)	181 (17)	165 (15)	180
Fair Weather Mean	123 (7)	114 (7)	127 (10)	100 (6)	115 (6)	130 (7)	153 (6)	150 (5)	120 (3)	- (0)	140 (1)	192 (3)	190 (5)	162 (6)	159 (4)	221 (7)	203 (5)	200 (8)	183 (8)	197 (6)	144 (5)	190 (5)	157 (6)	127 (6)	156

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·70 — AUGUST 1967

volts per metre

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
1																-95+	-570+	95+	215+	95+					
2							320+	415+	355+	370+	570+	560+	450	475	560	560	475	430+	310+	370+	300+	310+	275+	275+	
3	260+	180+	165+	185+	190+	240+	275+	285+	225+	225+	165+	200+	215	215									120	115	
4	120	105	120	105	125	125	135+			125+	120+				120+	140+	155	150	130	155	155	130	120		
5		105	100	95	120	105	100	100	105+	105+	120+	145+	160+	165	180	170	185	180	155	160	185	215	240	185	
6	160	165									170+	250+	200+	180+	130	145	150	130	135	135	165	165	165	140	
7	130	155	120	140	320+	285+	510+	775+	640+	510+	570+	440+	460+		795+	820+	888+	1045+	735+	595+	605+	550+	405+	270+	
8	250	275	250	240+							380+							405+	405+	440+	475+				
9	465+	390+		465+		415+	370+	250+	275+	225+	180+	180+	150+	155+	160+	170+	200	195	185+	260+	260+	285+			
10																									
11																			195+						
12																				50+	75+	85+	70	55	
13	50	75	90	95	105	75	105	85		75	85		70+	95+			130+	130+					100	105	
14	105	95	90	90	90	100	120	130+	150+	155+	180+	150+	180	195	170	215	200	240	150+	165+	275	275	215	160	
15	100	125	120	115	115	120	115	105+	95+	60	70	85+	85+	85+	75	70	85	65	90	90	75	85	90	95+	
16	75+	60+	55+	35+	25+	10+																	180+	215+	
17	180+		125+	95+			260+	225+	140+	135+	65+	95+	105+						120+	100+		125+			
18	130	95	95	75	70	85	85	105	95		125+				105+	120+	140	120+	150	160	165	160	145	150	
19	125	120	120	100	115	115	160	155	140	150	135	150	150+	145+	105+	105	105	130							
20										180+															
21											95+			95+	70+	100+	95+	100+	115+						
22		250+	335+	345+																					
23																									
24																									
25																									
26																				145+	185+	190+	140+	160+	
27	150+	120	145	165	165	165+	190+	200+	210+	210+	190	180	155	165	185	155	145	165	200	220	200+	190+	165+	155+	
28	155+	145	155+	115+	135+	145+	145+	165+	165	190	165									190	190	225	250+		
29									440+	405+	275+	285+	330+	215+	180+	180+	150+	155+	150+	180+	190+			130+	
30	125	120	115	100	95	125+			115+	115+	120+	145+							180+						
31																									
Mean	161 (16)	152 (17)	137 (16)	151 (17)	128 (13)	151 (14)	206 (14)	230 (13)	225 (14)	202 (16)	199 (19)	220 (13)	208 (13)	182 (12)	218 (13)	204 (14)	169 (15)	233 (16)	213 (17)	206 (17)	233 (15)	214 (14)	179 (15)	158 (14)	191
Fair Weather Mean	129 (10)	131 (13)	124 (11)	108 (10)	111 (9)	104 (7)	114 (6)	111 (4)	133 (3)	119 (4)	129 (5)	165 (2)	250 (4)	243 (5)	217 (6)	203 (7)	184 (10)	157 (8)	143 (6)	159 (7)	173 (7)	179 (7)	141 (9)	130 (7)	152

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·68 — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1								140+			120+	125+			105+			110	120	120	155			95	
2	75													225+	165+	105+									
3						140+	125+	160+	135+	155+	170+										210+	175+			
4	120+	120	130	130	150	150+	190+	200+	210+	225+	200+	155+	225+	225+	155+	160+	175+			155+					
5		120	125	130	130+									270+	425+				425+			320+	285+	165+	
6	165+	155+	155+	140	130+	140+	200+	285+		135+	105+	85+					125+								
7		85+								90+		105+	125+	125	130	120	140	140	140	165	140	125	140	165	
8	165	105	85	70	95	90	190	295	330	155	110	110	140	170	140	135	190	250	270	165	155			140	
9	140	90	85	95	105	95	110	110+	155+	165+															
10			35+	95	85	90	85	70	130	95	105	125	105	125	75+	35+									
11																									
12															130+	130+	120+	130+	135+					285+	
13	190	200	210	330		365+	260+						35+	250+	190+	210+	190+	165+	240+	250+	250+				
14		165+	165+	225+	195+	225+	250+	200+	200+	165+	175+	225+	225+	270+	225+	260+	235	225	200	225	150	140+	175+	235+	
15								285+		285+	285+	285+	190+	210+	190+	175+	165+	200+	120+	120+	155+	260+	210+	175+	
16	190+	165+						210+																	
17														200+	195+	165+	285+	285+	340+	330+	285+				
18	105+	155+	190+													235+	260+						320+	285+	
19	295+	285+	270+						165+	155+															
20			130+	105+		120+	195+	205	175	185	95	95+							180+	165+	155+	135+	140+	155+	
21	125+	120+	175+	130+	125+	130+	130+	95+	140+	165+			120+	150+	140+	155+	140+	85+							
22	105	95	100	125	110	100+										70+	85+	100+	130+						
23																				195				250+	
24	250+	175+	120+	95+	120+	120+	120+	95+			155+	185	130	175	250	270	270	285+							
25									270+	260	250	200	260	305	320	365	305	390	470	590	330	340	305	235	
26	270	250																							
27												140+	140+	155+	155+	135+	155+	130	130	235+	190+	130	175+	190+	
28											130+	140+	155+	130+	225+	415+	580+	675+	510+	450+					
29		390+	470+																						
30										235+	225+	260+	155+	150+									125+	135+	
Mean	169 (13)	167 (16)	163 (15)	139 (12)	125 (10)	147 (12)	169 (11)	181 (13)	191 (10)	176 (14)	163 (13)	160 (14)	154 (13)	196 (16)	189 (17)	185 (17)	214 (16)	226 (14)	244 (14)	243 (13)	198 (11)	203 (8)	208 (9)	193 (13)	183
Fair Weather Mean	157 (6)	140 (7)	123 (6)	139 (8)	109 (5)	92 (3)	125 (3)	190 (3)	212 (3)	174 (4)	140 (4)	155 (4)	159 (4)	180 (5)	210 (4)	223 (4)	228 (5)	207 (6)	222 (6)	243 (6)	186 (5)	198 (3)	223 (2)	159 (4)	175

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·62 — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1		115	110	105	115									110+	105+	115+	125	125	160	200	220		115	115	
2			120	110	110	110	115+	125+	100+	80+				115+				160+	150						
3					85+	85+	95+	110	115	115	105	110	135	140	135	110	80							105+	95+
4	70+	50+	45+	50+	65+	70+															115+				
5				80+	95+				105+				105+	105+	115	135+	155+	150	150	160	140	150	220	220	
6	220	230	175	245	125	115	125	115+	125+	110+										510+			230+		
7			170+	160+	140+	140+	145+	145+	150+	140+				155+	160+	170+	175+			185+	195	195	185	155	
8	150	150	105	95					115+	140	125	125+				150+	195+			150	160	115	135	125	
9					80+	125	105		120+													120+	120	110	
10	100	95	85	95		115			145	220+		125+		140+	135+	140+	175+	175+	195	160	135	135	105	120	
11	105	135	115	115	110+	115+	105+		80+	75+	70+						195	210	205+		195+	150+	140+	110+	
12	110+	110+		120+	105+	110+	115	120	125+	120+	125+	140+	140+	160+	160+	155+	160+	185+	185+	185+	190+	195+	245+	255+	
13	220+	185+	160+	160+	220+	315+	300+												195+		170+	190+	105+		
14			110												140+	175+	160+	175	175			145	160	105	
15	175	175	125		175			105+	120	120	125	160	230+						175+	140+	175+	110	105	105	
16	90	70	80	70	85	80	95											105	115	110	105	195	150		
17	45	60			80	95		105+	120+								210+	195+	160	220	185	105	100	80	
18	70	70	70	80+							100	100	115+	125+	125+	105+	115+	115+			115+				
19	115	100			95	100	65																		
20						220+											315+	520+	405	395	360	370	255	220	
21	210	210	115	270	315	255	230				245+	160	220+	105+								110+			
22	105+	95	105		70	70	80	65	70	95	110			105					125	160					
23																220	135		230	175					
24																		210+		255+					
25	110	105		95	105												210+	210+	205+	185+	175+	175+	170+	145+	
26	135+	120+	115+	125+																					
27																	245	220	245	380	270	290	300	195	
28																		105+					160	140	
29		140+		115+									140+	155+				150+	150+						
30	105+			105	100	65	75	80	125	115	140	175	195	210	160	135	140	150	145	150	160	150	135	125	
31	115	110	115	120	115	125				150	125	135	125	140	150	175	245	230	220		160			125	
Mean	124 (18)	122 (19)	113 (17)	122 (19)	119 (20)	128 (18)	127 (13)	108 (9)	115 (14)	123 (12)	127 (10)	137 (9)	156 (9)	136 (13)	139 (10)	149 (12)	179 (17)	188 (18)	189 (19)	219 (17)	179 (18)	171 (17)	162 (20)	141 (18)	145
Fair Weather Mean	125 (12)	123 (14)	110 (13)	130 (11)	124 (12)	114 (11)	111 (8)	94 (4)	115 (5)	123 (6)	119 (7)	140 (6)	152 (3)	149 (4)	140 (4)	160 (4)	166 (7)	171 (8)	190 (13)	205 (11)	190 (11)	178 (11)	160 (14)	139 (14)	143

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·63 — NOVEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	125			105	115	110+	115+	110+	115+	105+	110+	105+	110+	125+	120+	130+	140+	145+	130+	140+	110+	105+	100+	90+	
2	100+	80+					80+	100+				185+	140+	110+	140+	140+									
3									140		110	110	155+	195+	160+	160+									
4								70	80			85	80								85			85	
5	85	80	80	80	90	90	90	90	90	90	110	125	125	130	125	115	120	125	80	85					
6						155+	160+	170+	190+	180+	170+	185+	195+	195+	195	165	150	150	145	115	185				
7				90	105	115	60																		
8				90	80	80	75	120		105		130	140				220+		100	110	125				
9								160+			115+														
10		100	125		100	100	105		110			115+	140+	125+	145+	160+	160+								
11											145+														
12				160+	155+			140+	125+									130+				105+	110+	110+	
13	100	90	85	75	70	75	70	130	185	175	90	105													
14					105+	95	90	105	105+	100+	115+	125+	130+	140+	140+	160+	185+	220+	220+						
15									70+	105+										140+			90+	75+	
16	80+	80+		75+	75	70	75	75	85	85	105		100	75	90	105			85	150	145		85	105	
17		105+								85+	90+	105+	130+												
18																									
19																					160+	195+	240+	220+	
20	220+	170+	130+	105+	80+	90+		80+					90+					185+	185+	150	160	165	125	105+	
21	90+	85+	80+	90+			60	80																	
22		90+	80+	80+	80+				120+	115+	115+				115+	125	130+				140+	125+			
23				90+	90+	100+	105+	110+		130+	150+	195+	160+	60+			150+	205+	240+	170+	300+				
24									320+		390+														
25												110	115	125+	170+	115+	130+	150	145	130	115	110	110		
26	90	85	80	90	90	90	85	100	125	105	105	140	220	190	140	165	140	120	140	195	220	185	130	105	
27	100	100	100	100+	100+										110+	180+	150+	165+	220+	220+	220+				
28								155+	135+	130+								150	160	185	165	150	150	135	
29	130+		105	105	105	110	115			155	145	170	160	150	170		160	195	170				145	145	
30	135	120	120+	130+	135+	170+							170+	230+	230+	185+	175+	170+	165+	165+	185+	185+	155+	150+	
Mean	114 (11)	99 (12)	99 (10)	98 (15)	98 (16)	104 (14)	92 (14)	112 (16)	133 (15)	119 (14)	138 (15)	133 (15)	139 (17)	142 (13)	146 (14)	147 (13)	155 (13)	162 (13)	156 (14)	150 (13)	165 (14)	147 (9)	131 (11)	120 (11)	129
Fair Weather Mean	106 (6)	96 (6)	96 (6)	91 (7)	92 (9)	92 (9)	83 (10)	96 (8)	116 (7)	119 (6)	111 (6)	122 (8)	134 (7)	136 (4)	144 (5)	135 (5)	143 (4)	148 (6)	128 (8)	140 (8)	150 (8)	153 (4)	124 (6)	115 (5)	120

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

17 LERWICK — Factor 2·62 — DECEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	125+	140+	115+	90+	90+	110+	130+	150+	140+	140+	150+	165+	165+	160+	170	170	180	140+							
2		115+	110+	100+															170+	170	220+	265+	200	205	
3				150+	220+		205+													-	-	-	-	-	
4																									
5																									
6																									
7														185+											
8																			105+	105+			75	85	
9	70	75+	75+	85+			125+	120+	130+	125+	160+	460+			400+		160+		130+	125+	120	185+	130	165	
10					85+	90	90	160	105+				130	120	150	150	150								
11																			150+						
12											85+														
13																	195+								
14											105+	100+	100+	90+	90+	105+	105+	75+	65+						
15								140+								320+		150+	125+	140+					
16															140+				110+	90+					
17							105+			140+	115	115	100	115						130	125	140	125	115	
18	90	105+			90	90	90	90	105	100	105	115	100+						130						
19	120+	120	130	170	125		120		130	170	160	165	195	160			160				125	110	115	85	
20	70	65	60	65	60	65	90	130	190	205	125		140	160	155	150	130	165	240	300	300	220			
21																							240+	230+	
22	160+	150+								165+				185+			195+	170+			170+				
23				210+	185+				195+										230+			210+	170+	125+	
24	140+								60+	105+	105+	160+	145+	70+	160+	105+	145+	140+	130+						
25																150+	140	140	125	150	130	105	120	100	
26	125	115	110	105	120	105	115	140	150	185	150	160	145	140	125	115									
27																									
28								105+	150+																
29		85+	80+	75+		80+	80+	80+	80	90	105	100	110	125	125	140	125	90							
30	105			105	145+	150+			110+									205+	160+		145				
31							90	85	110	125+		115+	120	115	110	125	115	120	110	110	115	115	115	110	
Mean	112 (9)	108 (9)	97 (7)	115 (10)	124 (9)	99 (7)	113 (11)	120 (10)	127 (13)	141 (11)	124 (11)	165 (10)	132 (11)	135 (12)	163 (10)	153 (10)	150 (12)	139 (10)	141 (14)	147 (9)	161 (9)	169 (8)	143 (9)	136 (9)	134
Fair Weather Mean	92 (5)	100 (3)	100 (3)	111 (4)	99 (4)	88 (4)	99 (6)	121 (5)	127 (6)	150 (5)	127 (6)	131 (5)	134 (7)	134 (7)	139 (6)	142 (6)	143 (7)	129 (4)	151 (4)	172 (5)	151 (7)	138 (5)	126 (7)	124 (7)	126

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Monthly, seasonal and annual means for hours without hydrometeors and for fair weather hours

18 LERWICK 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
	No hydrometeors																								
Jan.	157	155	124	158	161	170	173	177	175	165	165	166	163	191	182	148	155	161	198	196	177	167	133	133	165
Feb.	163	157	151	143	164	155	139	137	149	150	155	170	162	168	182	183	193	199	193	210	196	195	159	158	168
Mar.	148	147	140	125	118	121	127	142	137	113	127	124	136	150	164	172	184	196	183	178	178	167	159	144	149
Apr.	111	101	89	89	104	104	115	113	117	116	127	125	133	137	139	143	152	166	158	157	161	159	137	123	128
May	170	191	187	148	143	133	147	184	179	173	177	153	158	185	186	193	220	215	221	254	209	212	218	188	185
June	134	122	117	126	127	129	128	136	143	135	128	126	128	121	127	136	145	137	152	148	146	137	136	140	133
July	148	146	151	166	145	151	165	168	150	143	160	173	190	212	195	199	207	204	264	228	220	184	181	165	180
Aug.	161	152	137	151	128	151	206	230	225	202	199	220	208	182	218	204	169	233	213	206	233	214	179	158	191
Sept.	169	167	163	139	125	147	169	181	191	176	163	160	154	196	189	185	214	226	244	243	198	203	208	193	183
Oct.	124	122	113	122	119	128	127	108	115	123	127	137	156	136	139	149	179	188	189	219	179	171	162	141	145
Nov.	114	99	99	98	98	104	92	112	133	119	138	133	139	142	146	147	155	162	156	150	165	147	131	120	129
Dec.	112	108	97	115	124	99	113	120	127	141	124	165	132	135	163	153	150	139	141	147	161	169	143	136	134
Year	143	139	131	132	130	133	142	151	153	146	149	154	155	163	169	168	177	185	193	195	185	177	162	150	157
Winter	137	130	118	129	137	132	129	136	146	144	145	159	149	159	168	158	163	165	172	176	175	169	141	137	149
Equinox	138	134	126	119	116	125	135	136	140	132	136	137	145	155	158	162	182	194	193	199	179	175	167	150	151
Summer	153	153	148	148	136	141	161	179	174	163	166	168	171	175	181	183	185	197	213	209	202	187	179	163	172
	Fair weather																								
Jan.	113	100	96	166	152	88	107	113	130	115	116	111	125	135	161	136	144	176	205	221	177	153	137	126	138
Feb.	134	137	141	129	146	151	109	117	142	156	161	165	183	190	173	171	195	208	192	202	173	153	136	141	159
Mar.	127	162	154	113	99	97	107	146	139	127	103	128	124	120	154	155	153	159	174	194	165	139	158	128	139
Apr.	107	97	86	84	96	93	98	103	110	104	117	115	113	112	119	118	146	153	162	158	158	150	135	115	119
May	100	101	111	119	105	92	103	136	157	133	125	115	168	214	195	161	151	159	176	144	118	123	98	118	134
June	127	110	104	108	117	118	125	113	139	146	150	147	121	117	131	144	160	143	134	148	140	138	141	139	132
July	123	114	127	100	115	130	153	150	120	-	140	192	190	162	159	221	203	200	183	197	144	190	157	127	156
Aug.	129	131	124	108	111	104	114	111	133	119	129	165	250	243	217	203	184	157	143	159	173	179	141	130	152
Sept.	157	140	123	139	109	92	125	190	212	174	140	155	159	180	210	223	228	207	222	243	186	198	223	159	175
Oct.	125	123	110	130	124	114	111	94	115	123	119	140	152	149	140	160	166	171	190	205	190	178	160	139	143
Nov.	106	96	96	91	92	92	83	96	116	119	111	122	134	136	144	135	143	148	128	140	150	153	124	115	120
Dec.	92	100	100	111	99	88	99	121	127	150	127	131	134	134	139	142	143	129	151	172	151	138	126	126	126
Year	120	118	114	117	114	105	111	124	137	133	128	141	154	158	162	164	168	167	172	182	160	158	145	130	141
Winter	111	108	108	124	122	105	100	112	129	135	129	132	144	149	154	146	156	165	169	184	163	149	131	127	136
Equinox	129	131	118	117	107	99	110	133	144	132	120	135	137	140	156	164	173	173	187	200	175	166	169	135	144
Summer	120	114	117	109	112	111	124	127	137	133	136	155	182	184	175	182	175	165	159	162	144	157	134	129	143

"Winter" comprises the four months January, February, November, December, "Equinox" the months March, April, September, October; and "Summer" May to August.

ESKDALEMUIR

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 21,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	951	940	941	944	946	956	958	952	947	941	929	918	922	918	930	904	882	904	922	937	945	933	933	933	933	1386
2	926	928	931	928	927	935	934	933	931	929	926	927	929	935	938	936	940	941	935	946	945	942	939	938	934	1419
3	937	939	941	939	942	943	937	939	938	933	917	916	917	913	931	924	922	932	941	944	943	943	942	941	934	1414
4 *q*	940	939	939	940	940	941	941	942	940	933	928	928	926	929	937	941	943	945	944	940	938	942	939	938	938	1513
5	941	939	939	938	939	942	945	945	944	940	933	934	937	940	936	941	941	944	946	946	948	945	945	943	941	1591
6	942	941	941	947	946	948	950	958	958	952	955	958	954	950	946	950	956	960	955	952	953	952	953	950	951	1827
7 *d*	952	952	953	953	954	958	961	962	952	930	937	943	938	909	922	890	894	915	896	883	922	930	951	921	932	1378
8 *d*	906	921	868	904	909	922	887	867	850	853	851	870	891	903	907	908	904	900	885	874	881	891	893	900	889	345
9	908	914	922	920	916	917	921	918	919	918	922	917	923	921	918	913	922	922	926	927	922	921	922	916	919	1065
10	921	924	927	930	934	936	937	937	935	929	926	923	924	926	927	925	930	929	916	917	914	922	929	934	927	1252
11	923	929	932	933	936	945	954	951	939	942	933	925	926	909	907	922	932	922	927	925	931	931	939	924	931	1337
12 *q*	927	930	930	933	933	935	934	934	933	927	923	922	922	926	926	927	932	936	939	942	943	942	942	940	932	1378
13 *d*	941	942	944	951	954	957	961	961	954	946	945	939	936	942	931	942	939	944	949	961	958	902	878	884	940	1561
14 *d*	887	675	797	787	873	885	892	876	847	851	885	884	885	887	896	898	907	912	916	918	918	918	918	914	*876*	26
15	916	927	914	917	922	922	921	921	921	920	917	908	922	922	919	921	927	926	918	921	915	923	925	932	921	1097
16	921	923	921	924	929	931	927	938	929	919	919	917	921	933	925	928	927	928	928	931	931	921	919	925	926	1215
17	922	924	923	924	928	931	929	927	927	924	923	927	925	934	937	937	938	934	944	942	943	941	937	934	931	1355
18	929	930	929	933	933	935	938	939	938	940	942	940	939	943	940	933	933	934	934	923	921	931	936	935	935	1428
19	937	938	936	939	941	942	942	940	934	928	930	929	931	935	935	942	949	951	947	942	931	938	937	936	938	1510
20	940	938	937	946	945	943	948	952	937	931	934	932	930	921	925	928	919	891	875	891	914	925	929	930	928	1261
21	925	927	931	928	930	928	930	930	924	916	916	924	926	927	931	928	928	922	930	933	935	940	938	933	928	1280
22	936	939	937	941	942	943	945	943	939	934	932	929	926	932	934	935	934	933	931	933	935	936	942	944	936	1475
23	952	958	951	949	952	956	951	955	948	942	947	947	947	948	947	945	944	944	943	944	948	945	941	939	948	1743
24 *q*	941	943	945	945	946	948	949	950	946	941	938	935	932	936	938	940	942	945	947	949	950	947	942	945	943	1640
25	953	952	954	955	957	959	960	957	955	946	943	942	937	936	936	935	939	943	945	947	949	950	951	951	948	1752
26	949	951	953	954	953	949	948	948	943	939	931	930	933	932	943	945	947	947	947	948	949	949	949	950	945	1687
27	951	951	951	952	955	957	957	955	949	944	941	941	947	951	955	951	953	957	955	955	956	953	950	948	*951*	1835
28	945	941	945	950	952	959	954	951	934	941	928	924	919	922	928	933	939	943	945	939	944	944	945	946	940	1571
29	947	948	949	945	949	954	957	949	941	943	940	934	931	933	939	944	947	947	946	947	949	947	947	945	945	1678
30 *q*	945	946	947	947	946	947	948	951	946	936	928	921	921	928	937	949	951	951	948	949	949	951	952	952	944	1646
31 *q*	950	949	949	951	951	953	955	952	942	930	921	920	923	932	945	950	952	953	955	956	954	955	953	949	946	1700
Mean	934	929	931	934	938	*941*	941	940	933	929	927	*926*	927	928	931	931	933	934	933	934	937	936	936	935	933	
Sum 28,000γ+	961	798	877	947	1080	1177	1171	1133	940	798	740	704	740	773	866	865	913	955	935	962	1034	1010	1016	970		Grand Total 694,365

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *d*	52·2	53·5	53·3	54·3	54·5	54·6	53·9	53·4	53·6	53·9	55·2	57·1	59·9	61·0	62·7	58·4	58·3	59·1	56·1	54·0	52·7	50·0	51·0	50·6	55·1	223·3
2	49·9	51·0	52·7	51·1	52·4	52·0	52·2	52·7	52·6	52·5	54·5	55·4	56·4	57·4	57·3	56·3	55·9	56·3	53·6	54·5	53·7	53·7	53·4	54·3	53·8	191·8
3	52·6	52·4	51·9	52·8	52·5	52·0	53·5	53·5	53·3	53·8	54·0	56·6	59·0	58·1	59·1	58·2	53·7	55·4	53·7	52·0	53·7	53·4	53·1	52·9	54·2	201·2
4 *q*	52·5	52·7	52·8	52·7	53·1	53·0	52·9	52·9	52·5	52·1	53·0	54·2	55·1	56·4	56·7	55·9	55·3	55·0	55·3	54·7	54·7	53·7	52·4	53·1	53·9	192·7
5	52·4	53·2	53·2	53·4	53·4	53·6	53·7	53·6	53·2	52·9	53·7	54·7	56·4	58·3	57·7	56·5	55·8	55·5	55·3	54·7	54·5	53·9	53·3	53·2	54·4	206·1
6	52·7	52·9	52·8	52·6	52·9	53·4	53·8	53·7	53·7	53·3	54·1	55·2	56·3	57·2	56·9	56·3	56·3	56·3	55·3	54·6	54·2	53·7	53·7	53·7	54·4	205·6
7 *d*	53·7	53·9	54·0	54·8	54·9	54·9	55·1	55·6	54·5	54·4	58·4	58·1	59·8	61·3	60·8	63·7	60·0	54·6	55·2	51·9	53·7	52·4	51·9	56·2	*56·0*	243·8
8 *d*	51·5	49·7	45·9	42·6	26·4	42·2	54·2	56·2	55·6	52·5	55·1	57·1	59·2	61·8	64·2	59·4	56·9	55·8	52·4	51·8	52·8	53·0	50·4	49·2	52·3	155·9
9	50·4	51·4	52·3	51·9	52·5	55·2	51·2	51·4	51·5	51·8	52·4	53·4	56·3	56·1	54·5	54·7	54·8	54·7	53·4	53·6	52·4	49·3	51·3	50·7	52·8	167·2
10	51·2	52·7	53·7	54·1	54·0	53·6	53·2	52·4	52·4	52·6	52·7	53·3	54·4	54·7	54·4	54·1	53·9	53·7	52·7	53·2	52·6	53·0	52·3	52·7	53·2	177·6
11	50·1	52·0	53·6	55·0	54·4	55·3	54·2	54·2	54·9	53·0	52·2	53·0	56·1	56·9	56·4	57·2	56·3	51·9	49·7	51·9	52·5	52·4	47·6	49·5	53·3	180·3
12 *q*	51·9	52·1	52·4	52·9	53·5	53·7	53·3	52·5	52·2	52·0	51·7	52·7	54·6	55·4	55·4	55·6	55·1	54·4	54·4	53·9	53·3	53·3	53·1	53·0	53·4	182·4
13 *d*	53·0	53·7	54·9	55·7	54·8	55·3	54·6	54·1	54·8	54·5	54·8	55·1	60·7	62·2	56·6	57·5	57·7	57·8	56·5	55·2	42·1	47·3	39·0	36·1	53·5	184·0
14 *d*	37·3	16·4	11·6	18·3	43·2	53·9	62·9	65·7	62·9	59·7	52·1	53·0	54·9	54·6	54·0	53·9	54·4	54·3	53·4	52·6	51·8	51·8	51·6	51·1	*49·0*	75·4
15	50·9	51·7	52·2	52·1	52·3	52·4	52·2	51·9	52·4	53·0	53·0	52·7	53·7	55·6	53·2	53·4	53·7	53·9	52·8	54·4	51·9	52·5	51·1	48·4	52·6	161·4
16	49·6	51·1	51·4	53·1	53·0	53·6	55·2	53·9	54·8	55·4	56·7	57·3	58·2	58·0	57·0	56·7	56·6	56·1	55·5	53·2	51·9	52·8	51·6	50·4	54·3	203·1
17	50·0	49·7	50·8	51·8	51·0	51·7	51·5	51·6	51·7	52·1	52·9	53·9	55·7	56·9	55·2	54·3	54·5	54·1	54·7	54·6	53·5	53·1	52·6	51·9	52·9	169·8
18	52·2	52·6	51·9	51·8	51·8	51·9	51·9	52·1	52·5	53·4	54·2	55·3	55·7	56·5	55·5	54·7	55·2	54·9	54·4	50·9	50·0	51·9	52·6	52·9	53·2	176·8
19	52·9	53·8	53·5	53·3	53·2	53·4	53·0	52·7	52·8	53·5	54·6	55·5	56·2	56·6	56·4	55·4	54·9	55·5	55·3	55·3	55·1	52·7	51·9	52·4	54·2	199·9
20	53·4	53·2	53·0	53·7	52·3	52·1	52·1	52·6	52·8	54·5	56·1	57·0	57·9	59·0	62·0	62·3	67·7	65·0	55·4	50·2	51·6	52·7	53·3	52·8	55·5	232·7
21	52·2	52·1	51·1	51·0	50·4	52·5	53·3	51·8	51·7	52·4	54·4	56·0	57·2	57·0	59·0	58·2	57·4	59·0	55·2	54·1	53·5	52·5	52·5	52·3	54·0	196·8
22	50·5	51·6	52·4	52·9	52·6	52·4	52·4	52·2	51·4	51·4	52·2	53·3	55·0	56·1	56·1	54·8	54·7	55·0	54·3	54·4	52·6	52·6	52·4	53·7	53·2	177·0
23	54·0	53·1	53·2	53·8	53·1	52·8	54·2	54·3	53·0	53·2	53·9	54·2	54·6	55·2	55·1	54·8	54·6	54·6	54·4	53·1	53·4	51·9	51·7	51·9	53·7	188·1
24 *q*	53·2	53·4	53·7	53·7	53·7	53·6	53·3	52·5	52·4	52·4	52·8	53·5	54·5	55·8	55·6	55·0	54·6	54·3	53·9	53·6	53·3	52·4	52·4	53·2	53·6	186·8
25	53·7	54·0	54·2	54·5	54·7	54·3	54·1	53·3	53·1	53·0	54·0	55·5	55·9	56·3	56·1	54·7	54·4	53·9	53·7	53·6	53·3	53·3	53·5	53·9	54·2	201·0
26	53·1	53·8	53·5	53·3	53·0	52·6	52·8	52·6	52·3	53·5	53·8	54·3	56·4	56·7	56·6	55·9	55·1	54·6	54·1	53·8	53·5	53·0	53·0	53·1	53·9	194·4
27	53·4	53·6	53·9	54·0	53·8	53·5	53·0	52·4	52·1	52·4	53·5	55·1	56·3	56·2	55·7	55·4	55·5	55·4	54·9	54·7	54·3	53·6	53·3	52·6	54·1	198·6
28	51·1	51·7	53·7	53·8	51·0	52·0	52·9	52·7	53·8	54·3	51·7	53·7	54·7	56·1	56·2	55·6	54·8	54·6	54·1	49·0	51·0	51·9	51·7	52·5	53·1	174·6
29	53·1	54·3	53·2	53·9	53·4	53·0	52·9	52·1	52·1	52·3	53·0	54·1	55·5	56·6	56·4	55·4	54·7	54·5	54·1	53·6	53·0	53·0	52·9	52·9	53·7	190·0
30 *q*	53·4	53·0	53·2	53·4	53·1	52·9	52·2	51·7	50·9	50·7	51·7	53·9	56·1	57·4	57·2	56·1	55·1	54·5	54·2	54·2	54·1	53·1	53·5	53·6	53·7	189·2
31 *q*	53·1	53·5	53·7	53·7	53·3	53·0	52·6	51·9	50·7	50·5	51·7	54·3	56·8	58·0	57·6	56·1	55·2	54·8	54·6	54·3	54·4	53·4	53·0	52·4	53·9	192·6
Mean	51·7	51·4	*51·4*	51·8	51·9	52·9	53·5	53·4	53·2	53·1	53·7	54·8	56·4	*57·3*	57·0	56·3	55·9	55·5	54·3	53·4	52·7	52·5	51·8	51·9	53·7	
Sum 1500·0′+	101·2	93·8	93·7	106·0	108·2	140·4	158·3	154·2	148·2	147·0	164·1	198·5	249·5	275·4	267·6	246·5	233·1	219·5	182·6	155·6	135·1	127·3	107·1	107·2		Grand Total 39920·1

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	475	475	475	474	474	473	472	473	473	473	472	470	474	480	483	504	539	520	508	498	489	489	485	485	485	633
2	489	487	485	486	485	481	481	481	479	478	476	477	474	474	478	484	484	485	488	485	484	483	481	480	482	565
3	483	480	479	479	479	479	480	480	480	479	482	481	480	489	489	491	496	491	488	487	484	481	479	479	483	595
4 *q*	482	482	481	481	481	481	481	480	480	480	477	478	473	473	476	480	479	479	480	482	485	484	485	483	480	523
5	479	478	478	478	477	477	477	477	478	479	479	478	474	475	478	480	478	479	479	479	479	480	479	479	478	474
6	480	478	478	477	476	475	475	472	471	471	469	467	466	469	470	473	473	472	473	476	476	476	476	475	473	364
7 *d*	474	473	472	471	471	471	470	468	468	472	472	471	471	489	505	538	551	519	519	549	519	501	493	489	491	796
8 *d*	506	527	522	448	417	416	414	421	449	473	487	503	526	529	537	552	573	583	568	544	534	518	512	504	*503*	1063
9	500	494	485	485	484	478	478	485	486	485	482	480	483	488	495	497	493	494	495	491	491	492	491	491	488	723
10	490	489	488	487	486	486	485	485	485	486	490	490	486	487	488	489	490	490	494	495	496	494	491	487	489	734
11	481	477	478	480	483	482	480	479	479	479	480	482	480	488	494	494	494	499	501	499	496	490	483	482	486	660
12 *q*	485	485	485	485	485	485	485	485	484	483	480	481	481	482	482	484	484	483	482	481	481	480	480	480	483	588
13 *d*	480	478	477	473	473	472	471	471	470	475	475	472	470	471	478	477	481	482	482	484	499	513	531	507	482	562
14 *d*	475	457	442	417	338	331	365	413	450	470	491	499	503	511	512	507	505	501	500	497	495	494	493	495	*465*	161
15	495	491	495	494	494	492	491	489	484	483	486	488	488	492	493	490	492	492	496	495	497	495	495	490	492	797
16	489	488	488	488	487	485	482	481	478	478	481	484	484	489	496	497	495	496	499	498	497	497	499	497	490	753
17	495	494	493	491	489	488	488	488	486	486	485	486	484	486	488	487	488	488	488	488	488	488	488	488	488	718
18	489	488	488	487	486	485	484	484	483	479	479	478	479	483	487	488	488	489	490	494	494	488	484	483	486	657
19	481	480	481	481	482	483	483	484	484	483	482	480	479	482	483	481	481	481	484	487	495	494	491	488	484	610
20	485	485	485	483	479	481	481	482	483	483	483	483	486	487	496	502	520	553	571	559	538	520	509	502	501	1036
21	498	493	485	481	480	478	480	485	488	489	488	486	486	490	491	495	501	502	501	498	495	491	491	490	490	762
22	488	480	483	484	485	485	488	488	490	488	488	485	483	484	486	487	488	490	492	487	494	493	489	487	487	692
23	485	482	482	481	481	481	481	480	481	480	475	476	476	478	480	481	481	481	481	482	481	481	483	482	481	532
24 *q*	481	480	478	477	477	477	477	477	477	479	479	478	478	480	482	483	483	481	480	479	479	479	479	477	479	497
25	478	477	476	474	473	473	472	473	473	474	475	474	473	475	478	482	483	481	480	480	479	479	479	478	477	439
26	477	476	476	476	477	477	477	476	476	476	476	476	477	479	480	482	481	481	479	477	477	477	477	477	477	460
27	478	477	477	477	477	477	476	476	475	474	472	472	473	474	476	477	477	476	476	475	474	476	476	477	476	415
28	479	478	477	472	471	465	462	465	471	472	477	477	473	476	479	481	482	482	483	485	483	479	479	478	476	426
29	477	477	473	474	475	476	474	474	472	470	467	467	471	474	478	480	481	481	481	479	478	477	477	477	475	410
30 *q*	477	477	477	477	478	477	477	477	478	479	476	470	470	473	477	480	479	479	479	479	478	477	477	476	477	444
31 *q*	476	477	477	477	477	477	477	477	479	479	477	474	469	470	474	478	477	477	477	477	477	477	477	477	476	431
Mean	484	483	481	477	473	*472*	473	475	477	479	479	479	480	483	487	490	*493*	493	493	493	491	489	487	485	483	
Sum 14,000γ+	1007	960	916	795	677	644	664	726	790	835	858	863	870	977	1089	1201	1297	1287	1294	1266	1212	1143	1109	1040		Grand Total 359,520

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — JANUARY 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1 *d*	2112 3432	18	2112 3432	18	2111 2421	14	0000 1420	7	1	13
2	2111 1131	11	1101 1131	9	2111 1021	9	0000 0010	1	0	13
3	1112 3320	13	1102 3210	10	1112 2320	12	0000 1100	2	1	13
4 *q*	0000 0011	2	0000 0011	2	0000 0011	2	0000 0000	0	0	13
5	1000 1111	5	1000 1111	5	1000 1001	3	0000 0000	0	0	13
6	0121 1120	8	0121 1120	8	0111 0010	4	0000 0000	0	0	13
7 *d*	0033 3446	23	0032 3346	21	0023 3445	21	0000 3343	13	2	12
8 *d*	5644 3433	32	5443 3332	27	4634 3433	30	3433 2442	25	2	12
9	2312 3322	18	2212 3322	17	2312 3122	16	2110 1000	5	1	12
10	2000 0112	6	2000 0112	6	2000 0011	4	0000 0001	1	0	13
11	3232 3433	23	2232 3333	21	3112 2433	19	1000 1111	5	1	12
12 *q*	1000 0010	2	0000 0010	1	1000 0010	2	0000 0000	0	0	12
13 *d*	1222 5255	24	1122 5245	22	1211 4155	20	0001 2123	9	1	12
14 *d*	6654 1111	25	6644 1101	23	6644 1110	23	4553 1100	19	2	12
15	3012 2223	15	3002 2212	12	2011 2123	12	0000 0000	0	1	12
16	2121 2122	13	2121 2112	12	2121 0022	10	0000 1000	1	1	12
17	2101 1111	8	2101 1111	8	1100 1111	6	0000 0000	0	0	12
18	1101 1132	10	1101 1122	9	1000 1031	6	0000 0010	1	0	12
19	2001 0131	8	1001 0131	7	2000 0011	4	0000 0011	2	0	12
20	1221 2432	17	1121 2331	14	0211 2331	13	0000 1432	10	1	12
21	2211 2311	13	2111 1211	10	2211 2310	12	1011 0100	4	1	12
22	2011 1021	8	2001 1011	6	2011 1021	8	1000 0000	1	0	12
23	2111 0012	8	2111 0011	7	1110 0012	6	0000 0000	0	0	12
24 *q*	0000 0001	1	0000 0001	1	0000 0001	1	0000 0000	0	0	12
25	1112 2111	10	1111 1111	8	1102 2000	6	0000 0000	0	0	12
26	1101 1000	4	1101 1000	4	1001 1000	3	0000 0000	0	0	12
27	0001 1101	4	0001 1101	4	0001 1001	3	0000 0000	0	0	12
28	2323 1131	16	1322 1121	13	2223 1031	14	0111 0010	4	1	12
29	1111 1110	7	1111 1110	7	1100 0010	3	0000 0000	0	0	12
30 *q*	0000 0011	2	0000 0011	2	0000 0000	0	0000 0000	0	0	12
31 *q*	0000 0111	3	0000 0111	3	0000 0001	1	0000 0000	0	0	13
								Mean	0·52	12

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 21,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	946	947	953	949	946	951	957	957	947	937	924	919	925	930	936	943	947	950	951	954	953	953	952	950	945	1677
2 *q*	949	949	950	952	952	953	955	954	948	938	931	928	929	931	933	939	943	945	948	936	934	947	953	952	944	1649
3 *q*	952	951	952	952	953	953	952	952	951	939	934	936	935	937	940	945	949	952	955	956	957	955	951	953	*948*	1762
4	957	956	957	957	957	958	963	964	960	953	943	935	934	928	939	939	937	949	953	949	948	942	940	930	948	1748
5	918	929	942	931	943	948	953	959	948	943	939	930	933	934	933	940	914	942	946	944	941	941	947	947	939	1545
6	946	944	945	946	954	951	955	956	955	947	936	931	932	929	934	937	941	937	945	949	953	952	947	947	945	1669
7 *d*	950	951	953	953	955	956	957	957	954	948	944	943	939	942	951	956	955	897	953	937	896	911	926	906	941	1590
8 *d*	883	869	936	926	903	899	916	931	916	900	885	868	880	903	897	918	927	931	944	942	923	923	936	918	*911*	874
9	919	928	918	918	926	931	930	923	921	914	909	909	905	913	916	920	923	930	930	932	933	930	933	936	923	1147
10 *q*	933	932	934	933	938	940	940	939	936	929	920	920	924	932	934	935	939	944	945	944	944	944	944	948	936	1466
11	943	944	942	946	948	951	962	952	943	929	914	917	920	930	937	946	946	944	946	945	943	946	944	944	941	1582
12 *q*	944	943	944	945	947	951	953	955	946	934	924	918	922	930	935	940	945	948	948	948	948	945	945	948	942	1606
13 *q*	946	944	946	947	948	950	952	954	952	940	931	927	929	938	945	953	955	946	948	946	933	930	930	930	943	1620
14	933	933	936	938	945	945	945	946	941	929	918	914	922	929	936	943	946	947	953	949	942	941	938	939	938	1508
15	940	938	939	940	944	946	948	949	946	940	930	928	934	936	941	945	950	950	953	955	953	945	944	947	944	1651
16 *d*	982	970	957	965	969	966	958	950	945	920	876	875	840	870	893	886	887	883	912	886	874	894	905	904	915	967
17 *d*	908	911	910	902	914	916	917	918	910	906	902	895	910	913	914	912	906	920	920	923	928	947	929	930	915	961
18	927	928	924	927	932	931	941	938	934	928	921	913	908	920	926	928	930	932	934	934	935	937	938	939	929	1305
19	939	938	938	939	939	942	941	940	937	932	919	915	912	920	928	938	939	934	941	949	941	943	943	953	936	1460
20	938	939	939	941	943	942	944	948	948	942	932	927	927	930	935	936	941	941	942	948	948	945	943	945	940	1564
21	948	946	946	946	946	947	949	953	955	953	941	930	926	930	927	933	935	938	938	930	933	933	938	932	940	1553
22	934	945	942	939	939	940	942	942	945	942	936	935	934	931	927	934	941	944	942	935	936	943	947	945	939	1540
23	942	947	938	946	947	947	946	953	954	946	942	942	939	933	925	922	926	925	928	906	913	918	924	926	935	1435
24	928	929	929	931	932	935	936	934	926	917	910	911	918	921	928	930	936	937	938	938	932	938	944	949	930	1327
25 *d*	948	949	949	951	945	960	947	960	948	930	922	919	924	931	941	945	951	937	922	932	938	947	943	945	941	1584
26	943	934	925	933	934	941	947	950	945	935	922	913	922	930	939	936	931	934	936	943	947	942	945	942	936	1469
27	947	946	947	945	945	947	948	944	937	924	911	899	912	919	924	934	937	931	943	942	945	951	951	950	937	1479
28	949	947	948	949	947	951	953	951	947	934	920	912	914	922	933	942	947	951	953	954	955	953	956	954	943	1642
Mean	939	939	941	941	943	945	947	*947*	943	933	923	*918*	920	925	930	935	937	936	942	939	937	939	941	940	937	
Sum 25,000γ+	1292	1287	1339	1347	1391	1448	1507	1529	1395	1129	836	709	749	912	1047	1175	1224	1219	1367	1306	1226	1296	1336	1314		Grand Total 629,380

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1200·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	51·7	51·9	51·7	50·6	51·2	51·7	50·9	51·4	50·9	50·9	52·3	54·7	57·8	59·6	59·4	56·9	55·6	55·4	55·1	54·6	54·1	53·7	53·4	53·0	53·7	88·5
2 *q*	53·0	53·3	53·3	53·2	53·1	52·9	52·8	52·2	51·2	50·7	51·9	54·3	57·0	57·6	57·2	56·7	55·7	55·1	54·3	53·8	52·9	53·1	53·6	53·8	53·9	92·7
3 *q*	53·8	53·6	53·4	53·2	53·2	52·9	52·7	52·5	52·1	52·2	54·2	57·0	57·9	57·8	57·4	57·0	56·2	55·7	55·2	54·7	54·6	54·2	52·3	53·3	54·5	107·1
4	54·2	54·2	53·8	53·6	53·5	54·2	54·2	52·8	52·0	51·3	52·7	54·9	57·8	58·1	58·8	60·1	57·5	55·6	55·1	54·4	54·1	52·9	42·3	42·6	53·8	90·7
5	41·1	50·3	48·3	51·2	50·8	51·9	52·9	53·2	52·2	51·9	52·5	54·5	56·9	58·4	57·0	59·3	57·1	55·8	54·6	53·7	52·9	52·1	52·3	53·4	53·1	74·3
6	53·8	53·9	53·6	55·0	53·7	52·6	52·7	52·5	53·1	51·7	52·1	54·3	57·0	57·5	57·0	56·5	56·0	55·9	55·1	54·3	53·8	54·0	51·4	49·5	54·0	97·0
7 *d*	53·0	54·2	53·9	53·5	53·3	53·2	53·0	52·5	52·1	51·5	52·4	54·1	55·6	57·0	57·5	57·9	61·5	61·1	65·7	61·5	47·3	51·3	44·5	41·5	54·1	99·1
8 *d*	46·8	46·7	42·6	44·7	36·2	45·9	51·0	52·2	55·2	57·7	56·5	56·3	57·0	59·5	58·3	55·6	54·3	55·6	56·5	56·2	53·8	48·4	39·8	45·0	*51·3*	31·8
9	46·3	47·3	50·5	52·4	52·3	52·7	52·3	50·3	50·8	50·6	51·3	54·0	56·0	57·5	57·6	56·9	55·6	54·3	54·0	53·8	53·6	52·6	51·8	52·6	52·8	67·1
10 *q*	52·0	52·6	52·7	52·8	53·2	52·6	52·1	52·1	51·3	50·5	51·4	54·2	55·2	56·2	56·9	56·0	55·3	54·5	54·2	53·8	53·1	52·7	52·8	52·9	53·4	81·1
11	53·0	52·9	53·2	53·3	52·7	54·7	55·2	50·8	49·8	49·6	52·5	55·5	57·9	58·0	57·2	56·9	56·0	55·2	54·5	54·2	51·6	52·3	52·5	53·1	53·9	92·6
12 *q*	53·2	53·3	53·5	53·4	53·3	53·3	53·1	52·3	50·9	50·3	51·5	53·6	55·8	57·1	57·0	55·8	54·8	54·5	54·3	54·2	53·8	52·2	51·6	52·8	53·6	85·6
13 *q*	52·1	52·8	52·9	52·9	52·7	52·8	52·2	52·1	51·2	50·5	51·4	53·2	55·7	57·5	57·8	57·3	56·2	58·2	58·5	57·4	56·8	53·1	49·9	50·4	54·0	95·6
14	48·7	50·4	50·5	51·1	50·7	50·8	51·5	51·3	51·0	50·4	52·3	55·4	58·2	58·7	58·1	56·1	55·1	55·0	55·0	54·8	54·3	53·8	52·2	50·9	53·2	76·3
15	50·6	51·1	51·2	52·1	52·9	52·2	52·4	52·1	51·2	51·4	52·3	54·0	56·7	58·3	58·6	57·7	56·5	55·7	55·7	55·4	55·1	53·6	52·8	53·1	53·9	92·7
16 *d*	52·8	52·1	50·5	51·7	51·8	52·1	51·7	52·2	49·6	52·4	53·2	57·7	59·5	63·2	61·2	55·5	53·7	52·4	42·7	50·4	47·7	49·2	49·6	51·1	52·7	64·0
17 *d*	52·1	51·5	53·8	53·7	54·9	50·8	50·6	50·4	49·8	50·5	52·6	54·2	57·1	58·7	59·3	56·9	55·8	54·2	53·3	54·1	53·3	50·8	50·0	50·4	53·3	78·8
18	50·6	52·0	51·7	52·4	53·1	52·1	53·3	52·1	51·3	51·0	52·1	54·9	55·6	55·8	56·3	55·8	55·1	54·2	53·9	53·8	53·1	52·9	52·8	52·9	53·3	78·8
19	52·7	52·6	52·6	52·8	53·0	53·2	52·7	51·6	50·4	49·6	50·6	53·7	56·8	59·3	58·9	59·4	57·3	55·0	54·6	52·7	53·5	53·6	53·2	50·3	53·8	90·1
20	51·2	51·9	51·7	51·5	51·4	50·7	52·0	51·7	50·9	50·4	51·4	54·0	56·6	58·2	58·2	57·2	56·7	55·7	54·5	54·6	53·6	52·6	53·1	53·3	53·5	83·1
21	52·8	52·6	52·2	52·4	52·4	52·4	51·9	51·8	50·5	50·4	50·9	54·0	57·0	59·9	60·1	57·8	58·1	56·2	55·8	56·5	54·9	52·5	51·9	50·3	54·0	95·3
22	50·2	49·6	50·7	50·4	50·8	50·4	50·0	50·3	49·9	50·7	51·9	55·0	58·2	58·8	58·8	58·2	57·7	58·2	58·6	56·8	54·6	53·5	53·0	52·7	53·7	89·0
23	51·1	52·1	51·9	52·6	52·5	52·1	51·7	51·8	51·5	53·6	56·8	58·2	60·0	60·5	60·9	60·8	58·8	56·7	59·1	54·5	48·7	50·1	52·6	53·4	*54·7*	112·0
24	53·3	53·1	52·9	52·7	52·2	51·8	51·0	50·0	49·7	49·6	51·5	55·1	58·2	58·9	58·2	56·5	55·1	54·0	52·6	50·8	49·8	52·3	52·5	52·6	53·1	74·4
25 *d*	53·1	53·5	53·3	53·1	52·8	54·4	51·3	51·4	49·9	49·0	51·4	56·8	57·0	58·8	58·6	56·9	55·8	52·0	51·4	53·5	52·4	52·7	52·5	50·9	53·4	82·5
26	43·9	42·1	47·6	54·5	53·0	52·4	51·5	50·8	49·1	48·9	50·3	53·2	55·7	57·9	57·0	56·0	52·7	53·8	52·9	52·1	52·0	51·1	50·9	51·7	51·7	41·1
27	53·4	53·6	53·9	53·9	53·3	51·9	51·9	51·3	49·5	49·3	51·4	53·5	57·2	58·6	58·8	58·3	56·5	53·1	51·1	52·6	53·2	53·3	53·2	53·1	53·6	85·9
28	53·1	53·0	53·5	53·1	53·1	52·3	51·9	51·3	49·8	49·2	51·3	54·2	56·8	58·4	59·3	58·2	56·8	55·8	55·4	55·0	54·7	53·2	53·6	53·0	54·0	96·0
Mean	51·2	51·7	51·8	52·4	52·0	52·2	52·2	51·7	51·0	*50·9*	52·2	54·8	57·1	*58·4*	58·3	57·3	56·2	55·3	54·8	54·4	53·0	52·4	51·1	51·2	53·5	
Sum 1400·0′+	33·6	48·2	51·4	67·8	57·1	61·0	60·5	47·0	26·9	25·8	62·7	134·5	198·2	235·8	231·4	204·2	173·5	148·9	133·7	124·2	183·3	67·8	32·1	33·6		Grand Total 35943·2

GEOMAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	477	477	472	472	472	474	472	472	473	472	470	470	463	466	476	481	480	479	478	477	477	476	475	474	474	375
2 *q*	475	474	474	475	476	476	475	476	476	477	472	471	474	476	477	477	477	479	479	483	484	481	477	476	477	437
3 *q*	476	475	474	474	475	475	475	475	474	473	470	470	471	470	472	474	476	476	475	475	474	474	474	472	474	369
4	472	472	472	472	472	472	470	470	470	473	474	471	474	476	477	485	479	479	477	480	480	482	480	469	475	398
5	462	458	446	463	465	466	470	470	470	470	469	465	467	472	475	484	490	483	480	479	479	479	477	476	*471*	315
6	476	476	475	474	471	472	472	472	472	472	471	468	469	472	475	478	479	480	477	476	475	474	476	475	474	377
7 *d*	472	471	472	473	473	472	470	469	469	470	466	465	466	469	470	473	487	531	512	557	576	608	549	510	494	850
8 *d*	510	501	452	428	428	450	463	466	470	474	482	494	506	504	514	502	498	491	485	487	492	495	486	484	482	562
9	480	479	479	477	478	477	476	477	480	481	484	483	481	482	485	488	492	490	487	487	486	487	487	485	483	588
10 *q*	487	486	485	484	483	481	481	480	481	483	480	476	479	480	481	484	486	485	483	482	481	481	480	480	482	569
11	481	481	482	481	480	476	460	463	468	472	469	470	474	479	481	482	483	483	482	482	483	481	480	479	477	452
12 *q*	480	480	479	480	479	479	477	475	476	477	473	468	471	472	476	480	481	481	479	479	478	480	481	478	477	459
13 *q*	480	479	479	479	478	477	476	474	476	476	475	472	474	472	473	480	483	485	485	488	492	495	496	493	481	537
14	490	487	484	482	480	477	477	476	478	479	477	473	475	477	481	482	482	481	480	481	483	483	485	485	481	535
15	485	484	482	481	480	479	477	476	476	476	472	469	466	467	472	476	477	480	479	477	478	482	482	480	477	453
16 *d*	473	475	477	476	475	472	471	470	469	466	474	496	542	548	550	533	524	531	537	525	529	517	496	492	*501*	1018
17 *d*	492	491	484	474	470	482	487	488	488	486	482	482	484	487	496	507	509	504	501	496	494	486	483	484	489	737
18	484	483	483	485	483	483	481	481	481	482	479	477	482	485	485	488	487	488	488	488	488	487	486	485	484	619
19	484	484	484	484	483	482	482	482	484	481	479	473	473	476	478	482	484	485	487	485	485	485	485	482	482	569
20	484	483	483	482	482	482	481	479	479	476	470	469	470	472	474	479	481	483	484	483	483	484	484	482	479	509
21	482	481	480	480	479	477	477	474	472	470	470	470	474	477	478	484	491	493	493	498	499	500	495	494	483	588
22	493	487	483	481	481	480	479	476	476	475	474	471	472	474	479	484	487	487	492	501	503	498	495	489	484	617
23	488	483	482	481	479	477	476	474	472	472	466	468	466	478	490	502	516	540	541	542	519	503	493	489	492	797
24	488	488	488	487	487	486	484	483	483	479	476	475	476	478	480	484	485	484	484	488	489	485	483	481	483	601
25 *d*	481	481	481	481	481	467	464	467	474	477	473	469	470	473	476	481	490	509	511	503	498	491	486	480	482	564
26	470	461	460	466	474	481	479	480	481	477	476	472	470	473	480	490	500	495	494	490	484	483	481	479	479	496
27	478	480	481	482	483	483	481	481	483	481	476	469	468	471	474	481	487	494	492	487	484	481	481	480	481	538
28	480	481	480	477	478	476	476	476	477	475	470	470	470	472	474	479	483	482	480	479	479	480	477	477	477	448
Mean	481	480	477	476	476	476	475	475	476	476	474	*473*	476	479	482	486	488	*491*	490	491	491	491	486	483	481	
Sum 13,000γ+	480	438	353	331	325	331	309	302	328	322	269	246	327	398	499	600	674	758	722	755	752	738	610	510		Grand Total 323,377

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — FEBRUARY 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1	1111 1000	5	1111 1000	5	1111 1000	5	0000 0000	0	0	13
2 *q*	0000 0121	4	0000 0121	4	0000 0010	1	0000 0000	0	0	13
3 *q*	0001 0011	3	0001 0011	3	0001 0001	2	0000 0000	0	0	12
4	0112 2324	15	0112 2223	13	0111 2314	13	0000 1102	4	1	13
5	4322 3321	20	3322 3321	19	4211 3201	14	2100 1200	6	1	13
6	0211 1103	9	0110 1103	7	0211 1003	8	0000 0000	0	0	13
7 *d*	2101 2556	22	1101 2556	21	2001 2456	20	0000 0446	14	2	13
8 *d*	6533 3344	31	6533 3343	30	5533 3224	27	4322 2212	18	2	13
9	3221 1111	12	2221 1111	11	3121 1001	9	0000 0000	0	1	13
10 *q*	0100 1000	2	0100 1000	2	0000 1000	1	0000 0000	0	0	13
11	1333 2122	17	1322 2112	14	0333 2021	14	0110 1000	3	1	13
12 *q*	0000 1102	4	0000 1101	3	0000 1002	3	0000 0000	0	0	13
13 *q*	1001 0222	8	1001 0221	7	0001 0222	7	0000 0110	2	0	13
14	1101 1022	8	1101 1021	7	1001 1012	6	0000 0000	0	0	13
15	1100 0014	7	1000 0014	6	1100 0003	5	0000 0001	1	1	13
16 *d*	3346 5344	32	3346 5344	32	3246 4343	29	0014 3233	16	2	13
17 *d*	3322 3323	21	1322 3323	19	3321 2211	15	1200 2011	7	1	13
18	1121 1000	6	1121 1000	6	1111 1000	5	0000 0000	0	0	13
19	0001 2223	10	0001 2223	10	0001 2222	9	0000 0000	0	1	13
20	0111 0122	8	0011 0112	6	0101 0122	7	0000 0000	0	0	13
21	1011 2222	11	1000 2222	9	0011 2222	10	0000 0201	3	0	13
22	2112 2221	13	2012 2221	12	1101 2121	9	1000 1011	4	0	13
23	3112 3342	19	3112 3242	18	2012 1342	15	1001 2332	12	1	13
24	0011 1122	8	0011 1122	8	0010 0021	4	0000 0000	0	0	13
25 *d*	0322 2333	18	0322 2332	17	0322 1333	17	0211 0322	11	1	13
26	4212 2222	17	3212 2221	15	4212 1212	15	2201 1210	9	1	13
27	0112 1320	10	0112 1310	9	0111 0320	8	0000 0110	2	0	13
28	1111 0112	8	1111 0111	7	0111 0102	6	0000 0000	0	0	13
								Mean	0·57	13

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 22,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	954	952	950	956	950	954	955	958	952	938	932	927	929	938	942	943	947	944	949	951	951	953	954	953	947	732
2	952	951	950	950	953	953	956	957	951	941	933	919	921	926	936	934	934	936	950	953	951	952	958	952	945	669
3	952	951	951	951	951	958	960	959	954	949	935	920	930	937	935	939	943	948	954	957	956	954	954	962	948	760
4	953	956	946	947	951	956	966	969	950	939	930	926	930	936	941	937	940	948	958	958	954	955	954	961	948	761
5	951	947	951	953	954	955	960	950	943	930	917	912	917	924	943	939	934	930	940	944	949	942	941	946	941	572
6	945	951	940	948	944	945	953	951	944	933	922	919	924	917	923	934	944	936	949	949	955	953	954	953	941	586
7	954	953	953	954	954	957	958	958	949	934	930	931	926	930	946	951	951	952	953	954	952	954	955	956	949	765
8 *q*	954	953	953	954	954	954	954	953	946	939	932	927	934	939	943	945	944	945	953	958	956	959	960	958	949	767
9 *d*	958	957	954	955	955	959	961	962	957	939	934	929	919	927	934	941	952	940	941	958	934	932	945	961	946	704
10	966	927	938	951	945	939	938	934	934	930	929	922	923	931	942	947	946	949	947	953	953	954	954	953	942	605
11 *q*	954	953	953	953	954	955	957	953	941	929	921	922	926	934	945	948	950	951	951	955	954	956	955	955	947	725
12 *q*	954	954	952	952	951	953	952	949	941	932	920	922	928	938	944	951	954	952	954	958	958	958	960	959	948	746
13	959	958	957	959	958	959	962	962	959	945	937	934	931	943	945	943	944	949	949	953	957	954	955	956	951	828
14	969	957	952	953	953	956	958	953	944	931	924	924	927	933	938	944	949	951	949	960	964	951	953	949	948	742
15 *q*	950	950	950	950	953	956	959	959	952	940	927	924	927	930	937	943	947	952	958	961	964	963	962	960	949	774
16 *q*	959	958	958	958	958	960	963	964	957	946	941	936	937	943	954	959	961	964	967	967	971	972	959	959	*957*	971
17	959	959	958	962	960	964	962	959	951	943	938	931	931	938	950	953	958	961	966	967	965	958	960	966	955	919
18 *d*	962	962	962	958	966	975	974	979	967	962	939	938	915	919	927	928	924	950	940	937	943	954	955	955	950	791
19 *d*	944	942	940	950	950	960	955	942	944	934	927	924	928	932	932	939	946	985	947	931	940	927	928	937	941	584
20 *d*	933	931	931	930	942	940	935	929	927	925	920	921	903	923	937	944	948	958	945	942	945	950	960	942	*936*	461
21	950	943	955	934	940	941	944	942	939	937	934	924	923	927	933	935	938	946	950	945	946	939	961	941	940	567
22	937	940	939	947	948	942	944	939	931	922	914	913	917	924	937	941	946	948	953	952	957	954	952	954	940	551
23	955	954	954	954	955	957	957	956	948	940	931	929	929	931	937	948	937	951	962	949	942	932	948	955	946	711
24	954	954	954	954	956	959	961	960	953	937	926	918	918	918	919	939	947	954	957	959	958	959	962	963	947	739
25	963	963	961	959	958	957	959	958	946	933	919	913	920	931	942	946	955	956	956	957	958	959	961	960	950	790
26	967	960	960	960	962	962	962	960	954	941	930	926	928	933	936	946	964	956	960	965	970	975	977	970	955	924
27 *d*	986	980	969	969	965	962	964	973	964	944	939	936	925	930	917	938	949	944	952	959	959	972	960	959	955	915
28	957	958	956	956	961	962	964	963	945	922	916	914	917	930	938	948	951	948	952	952	955	956	956	957	947	734
29	954	956	956	954	955	959	959	954	945	930	909	908	916	924	929	943	948	949	960	958	959	960	962	961	946	708
30	960	965	963	960	963	964	963	962	952	940	924	916	918	928	934	949	959	963	953	949	950	949	966	944	950	794
31	942	944	946	949	952	955	955	953	940	933	925	919	917	924	935	941	950	956	960	961	960	960	960	961	946	698
Mean	955	953	952	953	954	956	*957*	955	948	937	928	*923*	924	930	937	943	947	951	953	954	954	954	956	955	947	
Sum 28,000γ+	1607	1539	1512	1540	1571	1628	1670	1620	1380	1038	755	624	634	838	1051	1236	1360	1472	1535	1572	1586	1566	1641	1618		Grand Total 704,593

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1200·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	52·8	52·6	54·2	52·9	52·1	51·2	51·2	50·7	49·6	49·6	51·2	54·6	59·2	63·1	62·3	59·2	57·7	55·9	55·2	54·8	54·3	53·8	53·3	52·6	54·3	104·1
2	52·3	52·2	52·4	52·7	52·5	52·0	51·5	51·6	50·8	50·8	53·0	56·3	59·5	60·5	61·5	59·1	58·9	56·8	55·4	54·7	54·0	52·1	51·9	53·1	54·4	105·6
3	52·9	52·8	52·7	52·6	53·3	52·5	51·5	50·5	48·5	48·6	51·0	54·6	59·0	62·5	63·5	59·6	56·9	55·8	55·4	54·9	54·8	53·9	52·9	51·1	54·2	101·8
4	51·2	52·3	51·7	51·9	51·7	51·6	51·4	51·9	49·8	50·0	51·4	54·1	57·5	59·6	59·4	57·4	55·8	55·9	56·1	55·3	54·5	54·5	53·6	49·0	53·7	87·6
5	49·7	51·4	52·9	52·0	53·4	51·0	50·9	50·8	50·1	50·5	51·5	54·1	58·9	60·0	62·9	62·1	59·5	57·2	55·7	55·6	54·6	52·5	46·9	52·3	54·0	96·5
6	52·5	52·2	52·5	51·5	50·3	51·9	52·4	51·5	50·3	50·2	50·7	53·8	59·3	59·5	59·4	57·8	57·0	55·3	55·1	53·4	50·3	50·9	53·4	53·5	53·5	84·7
7	53·4	53·1	52·9	52·7	52·6	52·8	52·3	51·4	50·2	50·1	51·9	57·0	60·3	60·7	59·6	57·8	56·6	56·0	55·7	54·7	54·0	53·3	53·2	53·3	54·4	105·6
8 *q*	53·2	53·1	53·0	52·7	52·2	52·1	52·0	50·9	49·3	49·2	50·7	53·3	55·8	57·4	57·6	57·2	56·3	55·8	55·6	55·4	54·4	54·3	54·1	53·6	53·7	89·2
9 *d*	53·2	53·0	52·2	52·2	52·3	52·4	52·4	51·3	49·8	49·8	51·4	55·1	57·6	60·8	61·5	60·8	59·7	57·4	56·8	57·0	52·2	49·4	50·3	52·1	54·2	100·7
10	51·4	45·9	48·7	49·7	49·6	50·7	50·5	50·4	49·4	50·0	52·4	54·8	57·0	58·5	58·7	57·6	56·4	55·5	52·8	53·0	54·2	53·6	53·3	53·2	52·8	67·3
11 *q*	52·9	52·9	52·9	52·9	52·9	52·8	52·5	51·1	49·7	49·8	51·4	54·9	58·1	59·0	58·9	57·0	55·7	54·9	54·8	54·3	53·9	53·7	53·2	53·0	53·9	93·2
12 *q*	53·1	52·9	52·8	52·7	52·5	52·2	51·9	50·4	49·1	49·7	51·0	54·9	58·1	59·7	59·6	57·4	55·0	54·6	55·0	54·9	54·4	53·9	53·5	53·4	53·9	92·7
13	53·2	53·2	53·1	53·1	52·9	52·6	52·4	51·9	49·9	49·9	53·2	57·0	58·9	59·8	59·6	57·7	56·3	55·9	55·5	55·5	54·3	53·4	52·8	50·3	54·3	102·4
14	52·6	52·3	52·6	52·2	52·7	51·5	50·9	49·7	48·6	49·4	52·0	54·6	58·0	58·9	59·0	57·4	56·3	54·7	53·7	54·6	51·5	50·3	51·3	50·9	53·2	75·7
15 *q*	51·4	52·3	52·2	52·0	52·0	51·1	51·2	50·9	49·6	49·4	51·7	55·0	57·7	59·1	59·0	57·3	55·9	54·6	54·6	54·3	54·6	54·0	53·4	53·5	53·6	86·8
16 *q*	53·0	53·0	53·0	52·9	52·9	52·3	52·2	51·3	50·1	50·7	53·0	56·0	59·4	60·8	60·9	59·5	57·4	55·7	55·9	54·6	53·8	53·9	53·9	54·0	*54·6*	110·2
17	53·4	52·9	52·5	52·7	52·5	52·6	52·2	50·9	49·8	50·4	52·4	54·9	57·2	58·6	58·8	56·9	55·5	55·6	55·4	55·3	54·9	54·4	54·1	53·2	54·0	97·1
18 *d*	53·2	52·7	52·9	54·3	53·4	50·7	50·7	49·8	49·8	50·4	51·6	57·6	61·2	63·3	63·3	61·6	58·7	56·5	49·4	51·2	49·0	51·1	50·3	50·6	53·9	93·3
19 *d*	50·2	49·9	47·7	49·5	49·1	48·6	49·3	49·4	49·1	49·8	52·2	55·2	59·4	61·9	61·3	62·7	58·9	49·9	49·7	51·5	52·2	48·2	42·3	50·4	*52·0*	48·4
20 *d*	48·6	48·2	50·4	54·1	52·2	48·4	48·7	49·3	50·2	51·3	52·7	55·7	59·6	59·6	60·1	58·8	56·4	55·7	54·9	54·3	53·1	53·2	48·5	48·6	53·0	72·6
21	48·4	49·7	53·0	50·1	51·0	51·3	51·0	49·8	49·3	49·7	51·6	54·5	57·1	59·7	59·4	57·8	56·2	54·7	53·6	51·7	51·6	52·2	52·0	47·4	52·6	62·8
22	49·5	47·8	50·0	49·8	49·7	49·9	51·6	50·0	48·9	49·7	51·7	54·7	57·4	59·6	60·2	57·9	56·0	54·8	54·1	53·9	54·0	53·7	53·3	53·2	53·0	71·4
23	53·0	52·8	52·8	52·5	52·4	52·1	51·7	50·4	49·3	49·7	51·4	54·3	56·5	57·5	58·7	58·5	55·6	54·8	53·3	53·8	52·2	48·5	51·9	52·2	53·2	75·9
24	53·2	53·3	53·3	52·9	52·8	52·4	51·7	49·8	47·4	47·2	49·7	53·2	57·0	59·6	59·5	59·6	57·0	55·1	54·0	53·9	53·9	53·7	53·6	53·3	53·6	87·1
25	53·2	53·1	53·2	53·2	53·0	53·0	52·0	49·7	47·8	48·4	51·0	54·7	59·6	61·3	61·0	59·0	57·2	55·4	54·6	54·2	53·9	52·7	52·7	53·5	54·1	97·4
26	52·9	53·2	53·0	52·9	52·7	52·7	51·8	49·8	47·8	47·7	49·2	52·8	58·7	61·7	61·6	61·0	59·6	56·3	55·7	55·1	54·6	54·7	54·7	53·3	54·3	103·5
27 *d*	53·1	48·2	49·5	49·8	55·0	53·2	50·9	49·4	48·8	50·6	51·9	56·2	59·7	63·7	60·5	61·0	59·0	54·5	54·9	54·4	52·4	49·7	52·9	53·6	53·9	92·9
28	53·5	53·3	53·1	53·4	53·7	55·1	53·7	50·4	48·7	48·5	51·3	54·8	58·3	60·1	61·0	58·9	56·6	54·9	53·9	53·9	53·8	53·3	53·0	53·0	54·2	100·2
29	53·0	53·2	53·2	53·6	53·5	53·1	51·8	48·2	46·3	47·3	50·1	54·3	60·5	63·8	63·3	61·6	58·5	54·1	54·8	53·8	53·5	53·3	53·1	53·3	54·2	101·2
30	53·1	53·3	55·2	55·7	52·7	51·9	50·5	48·6	47·4	47·6	51·2	55·8	59·6	62·3	60·8	58·7	56·9	54·2	49·2	51·1	52·2	51·4	53·8	49·8	53·5	83·0
31	49·2	50·6	51·6	52·1	52·2	52·1	51·3	48·7	48·7	48·6	51·2	54·2	57·4	59·7	59·5	57·5	56·1	54·4	53·0	53·1	53·1	53·2	53·5	53·6	53·1	74·6
Mean	52·1	51·9	52·3	52·4	52·3	51·9	51·5	50·3	*49·2*	49·5	51·5	54·9	58·5	60·4	*60·4*	58·9	57·1	55·3	54·3	54·1	53·4	52·6	52·3	52·2	53·7	
Sum 1500·0′+	116·3	107·4	121·2	123·3	121·8	107·8	96·1	60·5	24·1	34·6	96·7	203·0	313·5	372·3	372·4	326·4	269·6	212·9	183·8	178·2	154·2	130·8	120·7	117·9		Grand Total 39965·5

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	479	479	478	470	468	467	471	472	476	476	473	466	461	466	473	473	477	479	479	479	479	479	479	479	474	378
2	479	479	479	478	477	477	476	477	479	479	473	467	462	467	475	485	490	490	185	481	481	481	478	477	478	472
3	477	477	477	477	477	474	474	476	478	475	467	467	462	463	465	471	476	480	479	478	478	480	480	479	474	387
4	476	473	474	476	476	476	475	475	476	473	468	461	461	466	473	479	480	479	476	477	478	479	478	476	474	381
5	471	472	472	474	471	468	469	474	477	480	476	469	468	472	483	505	516	508	498	490	484	487	485	479	481	548
6	475	466	463	467	473	475	474	475	477	478	481	471	466	472	476	477	482	485	484	483	483	481	478	477	476	419
7	477	477	477	477	477	477	476	477	478	476	470	464	467	468	472	478	478	478	477	478	478	478	478	477	475	410
8 *q*	478	477	477	477	476	475	474	475	473	471	466	459	453	456	463	468	472	474	475	474	475	474	475	476	471	313
9 *d*	477	477	477	475	475	474	473	474	474	473	471	467	469	471	476	475	483	495	495	493	500	496	488	482	480	510
10	445	455	469	469	468	473	476	474	471	470	466	463	462	466	473	478	480	481	482	482	480	478	477	477	471	315
11 *q*	479	479	478	478	477	477	476	478	477	471	465	459	460	466	471	477	477	477	477	477	477	477	477	477	474	384
12 *q*	477	477	477	477	477	476	475	476	477	474	471	462	460	460	465	474	478	477	474	474	475	476	476	477	473	362
13	475	475	475	475	475	474	474	475	474	470	463	459	459	460	467	475	481	480	482	483	483	482	481	479	474	376
14	471	469	473	476	475	475	475	476	474	468	463	460	458	460	466	472	475	477	481	478	477	478	477	478	472	332
15 *q*	478	477	477	477	476	474	473	474	474	470	464	459	454	459	467	471	473	475	475	474	473	472	471	471	471	308
16 *q*	473	473	473	474	473	473	471	472	471	466	460	458	455	456	460	466	472	475	475	475	472	472	471	471	*469*	257
17	474	474	474	473	473	472	472	473	471	470	467	465	460	461	466	471	472	471	472	471	472	475	474	471	471	294
18 *d*	472	472	472	473	465	461	462	465	466	464	461	458	463	469	477	489	495	491	504	502	502	488	479	472	476	422
19 *d*	469	467	462	459	460	460	466	473	475	475	470	467	470	481	494	504	516	535	518	515	513	503	482	479	*484*	613
20 *d*	476	471	475	473	466	472	478	482	478	478	478	477	477	476	478	484	495	500	506	506	504	493	478	477	482	578
21	477	477	458	467	475	478	480	484	485	482	476	471	467	472	478	483	484	485	489	491	492	488	478	473	479	490
22	478	479	481	479	477	479	478	480	480	477	476	471	469	468	473	478	480	482	480	480	480	480	481	481	478	467
23	481	480	479	478	477	477	478	478	477	473	472	467	464	464	467	474	481	478	484	485	489	493	487	482	478	465
24	480	480	479	478	477	477	477	482	482	477	471	462	455	459	462	470	475	477	477	477	477	477	478	478	474	384
25	477	477	477	477	476	475	477	479	477	473	470	467	460	461	466	471	473	475	477	476	478	478	477	476	474	370
26	473	475	475	475	473	472	471	478	476	471	468	463	458	462	469	469	473	477	476	473	472	472	471	473	471	315
27 *d*	463	458	463	464	463	458	465	466	466	459	457	457	459	465	472	473	485	493	490	483	480	480	477	476	470	272
28	473	474	476	476	476	476	476	477	476	473	469	466	465	468	477	488	494	491	488	485	482	480	478	477	478	461
29	477	477	477	477	476	476	477	477	465	464	464	462	462	468	473	479	490	494	487	483	481	479	476	477	476	418
30	476	476	472	461	463	468	472	475	474	464	461	458	458	461	472	477	480	485	498	495	489	487	471	458	473	351
31	467	472	474	475	476	476	477	480	473	469	463	460	461	462	465	474	476	480	482	480	480	478	476	476	473	352
Mean	474	474	474	474	473	473	473	476	475	472	468	464	*462*	465	471	478	483	*485*	485	483	483	481	478	476	475	
Sum 14,000γ+	700	691	690	682	664	662	688	749	727	639	520	382	325	415	614	808	969	1024	1022	978	964	921	812	758		Grand Total 353,404

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — MARCH 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1	2211 2200	10	1111 2200	8	2201 1000	6	0000 0000	0	0	13
2	0101 1102	6	0101 1102	6	0000 1102	4	0000 0100	1	0	13
3	0113 3222	14	0113 3222	14	0112 2102	9	0000 0000	0	1	13
4	2111 2203	12	2111 2203	12	2011 1103	9	1000 0000	1	1	13
5	2221 2223	16	2111 2222	13	2221 2213	15	0000 1211	5	1	13
6	3211 2222	15	3111 2221	13	2211 1122	12	1100 0000	2	1	12
7	0011 3011	7	0011 3011	7	0011 1001	4	0000 0000	0	0	12
8 *q*	0000 0120	3	0000 0120	3	0000 0000	0	0000 0000	0	0	13
9 *d*	1113 2334	18	1113 2334	18	0012 1233	12	0000 1213	7	1	13
10	4211 1220	13	4211 1220	13	4210 1120	11	2000 0000	2	1	13
11 *q*	0010 1001	3	0000 1001	2	0010 0000	1	0000 0000	0	0	13
12 *q*	0001 1100	3	0001 1100	3	0000 0000	0	0000 0000	0	0	13
13	1022 2212	12	1012 2212	11	0022 1112	9	0000 0000	0	1	13
14	3100 1121	9	3000 1121	8	1100 1121	7	1000 0000	1	1	13
15 *q*	1000 0001	2	1000 0001	2	1000 0000	1	0000 0000	0	0	13
16 *q*	0001 1123	8	0001 1113	7	0000 0121	4	0000 0000	0	0	13
17	1110 1112	8	1110 1112	8	0000 1001	2	0000 0000	0	0	13
18 *d*	0323 2332	18	0223 2332	17	0322 2232	16	0101 1112	7	1	13
19 *d*	3321 2554	25	3321 2553	24	3211 2544	22	2110 1323	13	2	13
20 *d*	3312 3224	20	2211 3223	16	3312 2124	18	1100 0212	7	1	12
21	3202 2124	16	3102 2124	15	3200 1123	12	2200 0102	7	1	13
22	2110 0111	7	2110 0111	7	2110 0000	4	0000 0000	0	0	13
23	0000 1333	10	0000 1333	10	0000 0112	4	0000 0111	3	1	13
24	0000 2200	4	0000 2200	4	0000 2100	3	0000 0100	1	0	13
25	0110 2111	7	0110 2111	7	0110 1001	4	0000 0000	0	0	13
26	1001 1212	8	1001 1212	8	1000 1001	3	0000 0000	0	0	13
27 *d*	3332 3323	22	3222 3323	20	3332 3323	22	2100 2221	10	1	13
28	1122 3201	12	1122 3201	12	0110 1100	4	0000 0000	0	1	13
29	1111 2311	11	1111 2311	11	0011 1210	6	0000 0110	2	1	13
30	3222 2233	19	2112 2223	15	3222 1233	18	1101 1113	9	1	13
31	2000 0102	5	1000 0102	4	2000 0000	2	1000 0000	1	0	13
								Mean	0·58	13

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 22,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	959	953	954	955	959	960	962	963	966	937	917	904	912	927	936	934	949	964	972	989	950	937	947	945	949	751
2	951	949	949	953	953	954	955	954	945	937	932	916	909	927	945	944	960	949	959	956	955	946	945	948	945	691
3	949	945	957	949	950	951	953	946	938	931	930	928	929	934	940	943	949	955	959	962	966	964	963	963	948	754
4	962	963	962	981	981	962	969	970	964	944	929	920	929	944	933	937	942	944	952	948	954	960	958	960	953	868
5	959	956	947	952	956	955	954	951	938	924	914	902	912	923	946	945	952	956	957	964	957	962	965	968	946	715
6	960	958	951	956	955	959	949	956	940	921	916	920	924	920	936	948	951	960	959	962	961	957	964	971	948	754
7	964	955	951	952	955	951	949	952	940	932	928	927	936	944	952	960	960	955	963	968	964	960	962	962	952	842
8	960	962	964	959	956	954	949	945	937	926	923	923	928	937	941	944	951	959	964	964	960	963	959	959	949	787
9	963	950	952	952	953	954	952	947	939	923	914	923	923	929	935	941	947	953	957	965	966	964	964	958	947	724
10	961	958	956	960	959	959	959	958	950	939	932	928	928	942	954	957	964	971	970	962	959	951	955	957	954	889
11	955	955	956	955	956	956	955	950	938	924	913	907	914	920	928	947	960	963	965	962	959	955	956	952	946	701
12	958	948	948	954	958	962	959	955	946	936	929	923	921	933	943	949	954	959	963	967	968	967	966	963	951	829
13 *q*	959	959	956	954	957	960	959	950	936	920	911	908	914	926	942	955	962	967	971	970	970	968	968	974	951	816
14 *q*	963	963	962	959	962	962	957	952	938	919	911	913	919	927	944	961	966	964	968	971	975	976	973	972	953	877
15	971	972	967	966	967	967	963	958	949	938	929	924	925	934	946	959	972	980	980	978	968	974	967	975	*960*	1029
16	966	961	959	966	967	973	976	967	947	932	927	928	936	934	952	981	968	964	966	961	952	959	963	960	957	965
17	956	951	940	937	971	958	953	945	934	910	907	914	935	946	954	957	965	967	974	972	967	969	962	968	951	812
18	964	955	954	953	953	950	947	941	932	923	920	923	925	939	942	946	955	971	971	971	974	967	967	954	950	797
19 *d*	943	946	948	947	951	946	945	945	909	889	906	911	912	926	932	958	943	951	969	962	959	950	949	944	*939*	541
20	941	948	942	953	947	950	947	946	936	925	925	926	932	930	948	956	964	967	964	973	961	954	954	958	948	747
21	963	958	948	953	961	967	958	955	938	921	918	921	923	932	956	956	954	960	956	962	964	964	955	954	950	797
22 *d*	973	960	961	941	945	961	939	930	902	896	912	915	922	922	935	970	966	965	979	975	958	957	954	954	945	692
23 *d*	952	962	963	954	956	958	955	944	932	925	926	934	942	953	974	990	994	970	962	954	949	956	960	983	956	948
24 *d*	971	961	930	937	943	959	956	947	930	902	890	903	907	928	940	946	951	973	1001	975	959	975	954	961	946	699
25	943	957	953	939	946	951	944	930	914	896	893	897	913	935	951	957	957	962	962	962	962	964	963	959	942	610
26 *q*	958	957	957	956	954	954	948	939	927	920	913	915	926	937	950	954	962	966	965	966	964	961	962	962	949	773
27 *q*	961	962	962	961	959	958	955	943	927	914	910	917	931	946	960	963	966	966	962	965	966	967	966	965	952	852
28 *q*	964	963	963	961	960	965	962	956	945	930	925	928	942	954	965	973	973	971	971	971	971	970	964	964	959	1011
29	961	961	962	960	962	962	957	946	935	927	919	919	917	941	938	960	985	969	984	986	979	978	975	967	956	950
30	960	957	964	963	967	966	961	951	938	924	914	918	920	926	941	951	962	974	971	972	971	968	968	970	953	877
Mean	959	957	955	955	957	958	955	950	937	923	*918*	918	923	934	945	955	960	963	*967*	967	963	962	961	962	950	
Sum 27,000γ+	1770	1705	1638	1638	1719	1744	1647	1492	1110	685	533	535	706	1016	1359	1642	1804	1895	2016	2015	1888	1863	1828	1850		Grand Total 684,098

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1200·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *d*	52·4	52·2	52·4	52·2	52·1	51·9	51·1	49·4	48·0	50·2	54·0	58·4	62·9	65·3	65·7	61·6	59·5	57·4	56·3	55·7	56·5	52·0	49·1	51·0	*54·9*	117·3
2	52·3	51·8	51·0	51·3	51·5	51·4	50·2	48·3	49·0	50·6	54·0	58·3	61·5	61·4	61·1	58·7	56·2	52·4	52·2	52·2	50·3	49·2	51·8	53·6	53·3	80·3
3	53·5	54·8	54·9	51·0	50·4	50·3	49·8	48·5	48·1	48·9	51·0	54·0	57·1	58·7	58·3	56·9	55·7	55·0	54·9	54·5	54·2	54·0	54·1	53·7	53·4	82·3
4	52·6	52·1	51·5	50·9	49·9	48·0	50·6	49·5	48·9	49·5	51·1	54·3	59·9	64·5	63·0	60·5	57·8	54·6	54·5	52·4	52·0	53·6	53·4	52·7	53·7	87·8
5	52·2	51·4	50·1	51·3	50·6	52·0	52·6	50·4	47·8	48·5	50·9	54·6	58·7	58·9	59·2	57·3	53·5	54·0	54·0	53·9	53·0	52·2	51·9	50·9	52·9	69·9
6	50·8	50·0	52·3	52·2	53·9	52·1	52·9	50·7	48·5	49·6	52·4	57·0	60·8	61·6	61·5	57·7	54·6	54·7	54·8	54·1	53·0	53·0	52·1	52·5	53·9	92·8
7	50·9	49·6	53·1	52·3	51·3	50·6	51·3	49·7	48·8	49·7	52·6	56·4	59·4	60·1	58·8	57·1	55·2	54·2	54·8	49·6	52·4	53·4	53·2	53·0	53·2	77·5
8	52·7	53·4	53·1	52·0	50·8	50·2	49·5	48·5	47·6	48·6	51·1	55·2	58·7	59·9	59·6	57·3	55·9	54·2	52·4	52·0	51·2	51·2	51·6	51·3	52·8	68·0
9	53·0	49·8	54·0	51·4	51·2	50·8	49·9	48·8	47·2	47·6	51·2	56·6	58·9	59·9	59·3	57·7	56·7	55·0	54·0	53·8	53·7	53·3	50·8	51·4	53·2	76·0
10	52·1	51·2	50·8	52·4	50·1	49·6	49·1	47·2	46·2	47·2	50·2	53·5	57·1	60·1	59·6	58·4	57·1	56·1	55·4	51·9	50·6	52·7	52·7	53·1	52·7	64·4
11	52·4	52·2	52·2	52·0	51·8	51·2	49·6	47·2	45·9	46·7	49·6	53·6	58·8	62·0	60·7	58·8	57·1	54·7	53·3	53·2	53·0	52·4	50·3	48·8	52·8	67·5
12	48·5	47·4	47·7	52·9	50·3	50·0	49·6	48·1	47·5	48·3	50·7	54·8	57·8	60·6	60·2	58·3	56·5	54·5	53·4	53·2	53·2	53·2	52·4	52·1	52·5	61·2
13 *q*	52·0	51·8	50·9	50·4	50·5	50·1	49·4	47·7	47·4	49·1	51·7	56·0	59·8	61·7	60·9	58·9	56·6	55·0	54·2	54·2	53·9	53·5	54·1	52·9	53·4	82·7
14 *q*	52·0	51·3	50·5	50·2	50·3	49·7	48·1	46·3	45·9	47·5	50·9	54·1	57·4	59·2	59·5	58·7	57·0	55·8	54·9	54·9	54·9	54·8	54·1	53·7	53·0	71·7
15	53·2	53·0	52·4	52·2	51·6	50·9	49·3	48·8	48·7	49·9	52·2	55·0	58·3	59·8	58·5	57·0	55·7	55·5	54·9	55·1	54·9	54·9	53·1	52·4	53·6	87·3
16	52·1	51·1	50·5	50·7	48·5	49·6	49·9	49·7	48·9	50·5	54·1	57·8	63·3	63·3	61·5	60·7	57·9	56·0	55·1	52·4	48·4	53·1	53·6	52·3	53·8	91·0
17	48·7	45·2	43·5	49·2	48·1	47·7	47·6	46·5	47·0	50·9	54·8	55·9	58·0	59·9	59·4	56·1	54·8	54·4	54·5	54·8	54·7	54·3	53·3	51·6	52·1	50·9
18	48·5	49·3	49·4	48·7	49·3	49·4	47·8	47·2	48·4	51·4	55·6	59·8	62·9	63·9	62·0	59·6	56·3	55·3	53·6	53·0	54·0	52·4	52·1	46·5	53·2	76·4
19 *d*	41·1	42·2	41·4	45·9	39·2	43·4	45·2	44·1	48·5	53·4	55·8	59·6	61·8	63·3	63·1	59·4	56·6	54·3	54·2	52·1	48·1	50·0	49·8	50·9	*51·0*	23·4
20	51·8	51·6	51·3	52·4	49·7	48·5	46·7	45·2	46·0	49·3	53·3	57·3	61·0	62·1	60·8	58·6	56·6	54·6	52·3	47·9	50·9	51·2	52·3	52·9	52·7	64·3
21	50·9	47·6	47·2	47·0	45·7	44·5	44·4	44·4	45·7	49·7	54·1	58·4	62·0	63·3	62·5	60·0	56·4	53·9	51·8	51·7	51·9	52·6	49·7	49·4	51·9	44·8
22 *d*	45·8	47·8	46·2	45·3	46·7	43·0	45·5	43·7	44·9	53·8	55·4	58·3	61·7	61·5	59·4	59·4	59·6	57·4	54·6	53·6	53·1	51·1	51·6	51·9	52·3	51·8
23 *d*	51·0	49·1	48·8	51·1	50·1	48·5	46·8	45·6	46·3	49·7	53·2	57·0	60·6	61·7	61·8	61·2	61·9	61·3	56·1	52·0	47·6	53·6	55·0	56·4	53·6	86·4
24 *d*	55·5	49·6	55·4	51·4	58·8	53·6	46·3	44·8	45·8	49·6	53·8	56·9	60·4	60·5	57·5	55·9	53·2	51·3	47·8	50·6	50·8	50·9	52·1	52·3	52·7	64·8
25	56·1	55·0	52·9	54·6	53·2	49·6	48·5	46·8	46·6	48·0	50·4	53·4	57·1	59·2	58·5	57·0	55·7	55·0	54·6	53·8	52·4	52·0	52·3	53·0	53·2	75·7
26 *q*	53·0	52·3	52·1	51·7	51·1	50·1	48·2	46·7	46·4	47·5	50·7	54·0	57·2	58·7	59·2	57·0	55·5	54·7	54·1	54·2	54·0	53·7	53·4	53·2	52·9	68·7
27 *q*	52·8	53·1	53·0	52·2	51·5	50·4	48·8	46·8	46·7	49·1	53·1	56·5	58·6	59·5	58·3	56·9	55·6	55·0	54·9	54·6	53·8	53·4	53·2	53·1	53·4	80·9
28 *q*	52·5	52·2	52·3	51·9	50·7	50·8	49·4	48·1	47·6	48·7	51·7	54·9	58·4	60·0	59·5	58·3	56·9	55·5	54·6	54·5	53·9	52·7	52·6	52·2	53·3	79·9
29	52·2	52·4	51·5	50·8	50·6	49·6	47·8	46·2	46·3	49·0	52·2	56·8	58·3	59·5	58·4	57·9	58·3	56·7	55·2	54·7	54·9	54·7	53·8	53·7	53·4	81·5
30	52·7	51·1	51·0	49·9	50·3	49·3	47·6	46·8	47·9	48·7	51·5	54·5	57·1	58·6	57·5	56·5	55·7	54·7	54·2	53·4	53·6	53·5	53·2	53·2	52·6	62·5
Mean	51·5	50·7	50·8	50·9	50·3	49·6	48·8	47·4	*47·3*	49·4	52·4	56·1	59·5	*61·0*	60·2	58·3	56·5	55·0	54·0	53·1	52·6	52·8	52·4	52·2	53·0	
Sum 1400·0′+	145·3	121·6	123·4	127·5	109·8	86·8	63:5	21·7	18·5	81·2	173·3	282·9	385·5	428·7	405·3	349·6	293·9	250·4	220·6	193·5	176·9	183·1	173·0	166·1		Grand Total 38182·1

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	474	475	476	476	476	476	476	476	466	463	460	461	463	461	460	466	471	478	480	484	511	514	491	483	476	417
2	481	482	481	480	479	477	477	476	473	467	464	463	470	470	474	479	489	502	498	498	496	490	484	481	480	531
3	480	474	464	472	476	476	477	479	477	473	467	462	460	463	468	474	476	477	477	476	476	476	476	476	473	352
4	477	476	476	472	470	471	469	469	466	469	468	462	457	467	482	492	494	496	491	488	486	481	477	480	477	436
5	473	473	475	475	473	469	469	470	475	476	474	470	466	472	476	488	498	492	485	482	483	482	477	476	477	449
6	472	472	471	470	465	466	471	470	470	470	469	465	470	477	483	488	493	490	484	480	481	481	480	476	476	414
7	471	470	465	463	468	470	474	476	476	474	469	462	456	461	466	474	476	481	480	482	479	477	476	476	472	322
8	477	476	469	466	465	468	472	475	475	474	469	465	461	459	463	467	470	476	480	481	481	479	476	475	472	319
9	467	470	470	473	476	476	476	477	474	470	463	454	448	452	461	469	472	475	476	476	476	477	474	474	470	276
10	476	476	476	472	472	472	474	474	470	463	457	453	454	459	466	473	479	482	484	489	486	482	479	478	473	346
11	480	478	477	477	477	476	480	478	475	469	461	453	453	461	468	473	478	484	487	485	483	483	482	481	475	399
12	476	476	474	470	470	472	475	476	473	470	466	462	457	453	462	470	474	478	477	476	476	476	476	476	471	311
13 *q*	476	476	476	477	476	476	476	477	476	471	462	456	457	460	466	470	473	476	476	475	474	474	473	471	472	320
14 *q*	471	471	472	474	475	476	477	477	476	470	465	463	458	459	464	469	475	476	475	474	472	471	472	472	471	304
15	473	473	474	475	475	476	476	474	470	465	459	459	460	461	467	471	475	475	476	477	478	476	476	470	471	311
16	472	474	476	472	469	469	465	464	463	454	451	447	452	459	466	474	482	489	499	501	490	480	476	476	472	320
17	471	463	458	448	448	458	465	469	465	458	453	451	448	455	469	477	477	477	479	480	479	478	477	472	*466*	175
18	470	470	470	470	470	472	476	476	470	463	459	452	457	465	476	480	482	486	486	485	480	480	478	476	473	349
19 *d*	458	450	440	428	437	454	468	472	469	460	459	457	457	464	480	492	493	488	486	491	490	481	477	479	468	230
20	479	477	477	468	472	476	477	476	472	462	456	450	448	461	472	479	485	491	495	498	488	485	482	479	475	405
21	472	459	457	459	459	455	451	458	459	456	451	447	447	451	463	479	492	499	497	491	485	480	479	479	468	225
22 *d*	468	455	447	448	449	451	458	463	460	457	455	452	447	454	465	472	481	488	488	492	493	489	488	487	467	207
23 *d*	488	485	475	476	476	476	478	478	473	468	463	457	455	461	469	484	509	543	568	543	513	495	486	462	*487*	681
24 *d*	452	447	421	441	457	450	469	476	480	476	475	471	473	485	501	506	501	496	495	485	482	473	466	465	473	343
25	459	452	459	459	459	470	479	483	481	479	476	465	459	465	472	476	477	480	481	481	481	477	476	475	472	321
26 *q*	477	479	480	481	481	480	480	480	476	469	464	456	451	456	465	472	476	481	481	478	477	476	476	476	474	368
27 *q*	477	477	478	479	480	480	481	479	473	468	462	462	461	464	470	474	476	481	481	478	477	476	476	476	474	386
28 *q*	476	477	477	479	480	479	479	476	473	470	465	461	461	465	470	472	477	481	483	481	479	478	477	476	475	392
29	476	476	476	476	479	481	482	483	477	467	463	461	463	466	473	477	481	487	485	482	479	476	476	476	476	418
30	476	477	476	476	477	478	477	476	473	468	462	455	455	461	467	470	473	477	478	477	477	477	476	475	472	334
Mean	473	471	469	468	469	471	473	474	472	467	463	459	*457*	462	470	477	482	486	*487*	485	484	481	478	476	473	
Sum 13,000γ+	1195	1136	1063	1052	1086	1126	1204	1233	1156	1019	887	754	724	867	1104	1307	1455	1582	1608	1566	1508	1420	1335	1274		Grand Total 340,661

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — APRIL 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1 *d*	2033 3344	22	2023 3343	20	1031 2224	15	0010 0133	8	1	13
2	1023 3323	17	1013 3321	14	1022 1123	12	0001 0211	5	1	13
3	2111 0111	8	2001 0111	6	2010 0000	3	2100 0000	3	0	13
4	1322 5222	19	1322 5222	19	1321 4221	16	0001 2110	5	1	13
5	2222 3322	18	2212 3322	17	2122 2212	14	0000 0101	2	1	13
6	2232 3312	18	2232 3312	18	2222 1111	12	0000 1000	1	1	13
7	2211 1231	13	2211 1221	12	2210 1130	10	1100 0000	2	1	13
8	1121 1221	11	1111 1221	10	1121 0011	7	1000 0000	1	0	13
9	3012 1013	11	3002 1013	10	3010 0002	6	1000 0000	1	1	13
10	1210 1231	11	1100 1221	8	1210 0030	7	0000 0100	1	1	13
11	0001 1122	7	0001 1121	6	0000 1102	4	0000 0000	0	0	13
12	2200 0101	6	2200 0101	6	2200 0001	5	0100 0000	1	0	13
13 *q*	1000 0012	4	1000 0012	4	1000 0011	3	0000 0000	0	0	13
14 *q*	1011 1211	8	1011 1211	8	1010 0000	2	0000 0000	0	0	13
15	1000 1122	7	1000 1122	7	0000 0001	1	0000 0000	0	0	13
16	1222 3332	18	1222 3331	17	1221 1132	13	0011 1221	8	1	13
17	3322 2113	17	3312 2112	15	3221 1003	12	1200 0000	3	1	13
18	2110 1213	11	2110 1213	11	1110 1113	9	0000 0001	1	1	13
19 *d*	3433 3332	24	3433 3331	23	2432 2132	19	3310 2111	12	1	13
20	2211 2231	14	2111 2231	13	2211 1131	12	0100 0110	3	1	13
21	2211 2322	15	2211 2322	15	2110 1102	8	2000 0110	4	1	13
22 *d*	3333 3332	23	3333 3332	23	2233 3222	19	3101 0000	5	1	13
23 *d*	3112 3443	21	3102 3443	20	2110 2343	16	1000 1443	13	1	13
24 *d*	4433 3443	28	4333 3443	27	4433 3332	25	3320 2112	14	2	13
25	3222 0211	13	3212 0211	12	3221 0011	10	2200 0000	4	1	13
26 *q*	1111 2110	8	1111 2110	8	0100 0000	1	0000 0000	0	0	13
27 *q*	1010 0111	5	1000 0111	4	0010 0000	1	0000 0000	0	0	13
28 *q*	1100 1111	6	1000 1111	5	0100 0001	2	0000 0000	0	0	13
29	1011 2322	12	0001 2322	10	1010 1111	6	0011 0110	4	1	13
30	2111 1110	8	1011 1110	6	2111 0000	5	0000 0000	0	0	13
								Mean	0·67	13

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 17,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	967	969	973	970	965	957	957	947	936	927	926	933	941	952	963	962	964	967	969	1006	990	979	1001	995	963	6116
2	961	971	969	971	974	977	969	957	951	932	923	913	925	935	936	965	951	984	985	970	962	953	954	960	956	5948
3 *d*	949	903	958	912	929	846	858	859	841	830	826	864	981	934	971	1021	1058	1031	997	983	924	900	908	903	925	5196
4	918	921	910	942	927	925	919	903	888	879	885	890	906	903	938	949	947	955	954	959	943	949	940	944	925	5194
5	947	957	943	937	938	939	933	921	906	886	898	907	920	924	938	939	948	955	959	957	955	953	954	959	936	5473
6	944	943	943	942	945	939	942	938	930	919	906	909	919	927	933	946	964	965	963	961	959	956	948	943	941	5584
7	950	964	960	950	942	959	949	937	928	917	917	910	905	914	924	935	951	964	967	964	961	959	957	957	943	5641
8 *q*	953	952	951	950	950	953	950	943	933	921	912	908	910	923	930	950	964	980	969	962	958	954	955	954	945	5685
9 *q*	955	954	949	950	954	955	953	951	952	947	928	927	934	927	941	946	962	967	965	964	962	962	960	966	951	5831
10	962	959	957	956	952	955	956	950	934	927	918	917	907	930	957	960	957	963	971	970	965	965	964	966	951	5818
11	986	964	955	945	955	952	954	944	932	922	917	914	917	931	944	958	962	978	968	971	975	977	966	958	952	5845
12	956	960	963	969	954	947	946	940	928	915	917	932	933	932	947	951	972	977	979	979	969	969	972	962	953	5869
13	958	959	954	967	957	936	934	937	941	927	919	919	921	921	947	950	962	978	974	975	967	963	960	961	949	5787
14	962	962	955	956	949	949	947	938	930	926	924	928	936	945	956	975	958	977	992	987	971	961	954	941	953	5879
15	945	951	954	950	947	945	939	932	926	919	913	910	918	932	938	954	964	973	983	973	962	965	965	969	947	5727
16 *q*	960	956	955	954	954	950	953	953	948	939	933	938	928	939	944	953	961	975	989	986	979	973	968	961	956	5949
17	973	961	958	958	957	949	958	951	938	925	921	915	918	929	949	951	956	975	985	978	977	964	959	958	953	5863
18	956	952	952	964	953	946	951	943	932	924	925	931	938	937	941	958	962	971	980	973	973	973	971	969	953	5875
19	966	977	964	949	951	952	954	960	955	944	931	927	920	926	941	966	966	973	975	971	974	966	964	964	956	5936
20 *q*	969	968	956	955	952	955	952	943	936	933	922	928	936	943	960	962	966	972	979	971	967	968	967	965	955	5925
21	964	963	962	962	960	957	951	942	936	936	938	941	945	945	950	962	982	983	987	988	967	969	971	975	960	6036
22 *q*	969	961	961	961	964	958	951	941	929	922	921	920	922	936	939	946	955	967	973	969	971	970	971	971	952	5848
23	969	969	971	970	970	962	953	942	933	929	934	945	954	962	971	983	989	999	1000	985	998	988	977	974	968	6227
24	975	973	971	971	966	958	945	936	928	930	937	949	953	952	951	965	978	1006	1038	1006	995	992	986	984	*969*	6245
25 *d*	979	973	975	973	973	971	967	960	945	933	938	930	951	1052	1033	958	976	1037	1091	1019	982	708	279	−129	895	4474
26 *d*	348	124	256	567	627	505	547	613	736	805	849	855	895	932	911	914	904	904	913	918	925	931	917	915	*742*	811
27	916	901	891	899	914	907	887	877	885	887	880	879	903	915	903	917	943	959	983	973	977	929	932	919	916	4976
28 *d*	917	916	924	926	932	930	919	883	863	849	840	877	903	933	900	941	900	953	1008	1024	967	930	904	894	918	5033
29 *d*	880	822	925	905	842	874	847	835	839	861	859	855	877	873	882	925	927	928	950	960	950	940	935	936	893	4427
30	939	936	939	937	936	932	925	918	904	894	894	891	898	906	974	1028	987	1029	1053	1005	967	945	955	933	947	5725
31	895	868	848	927	913	857	923	915	903	889	885	889	891	900	914	928	942	962	954	961	951	942	941	934	914	4932
Mean	932	920	926	937	935	926	926	920	915	909	*908*	911	923	932	943	955	961	974	*982*	976	966	950	934	918	937	
Sum 28,000γ+	888	509	702	1045	1002	697	699	509	366	194	136	251	605	910	1226	1618	1778	2207	2453	2268	1943	1453	955	461		Grand Total 696,875

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1000·0
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	.
1	52·9	53·0	54·6	51·5	49·6	48·6	48·2	47·0	46·9	48·7	51·2	54·6	56·8	57·5	57·8	57·1	56·3	55·2	54·6	56·2	53·4	52·1	53·0	48·7	52·7	265·5
2	47·7	49·1	49·0	48·6	49·0	48·4	46·3	44·9	46·7	48·0	52·9	57·0	58·8	58·9	58·4	58·5	55·2	54·7	51·0	50·2	47·2	47·2	47·4	49·2	51·0	224·3
3 *d*	47·6	55·2	52·2	56·0	63·0	55·9	50·7	47·2	50·6	52·8	54·1	57·0	57·1	60·9	61·0	58·9	56·0	52·3	52·7	48·1	45·8	46·0	46·0	45·4	53·0	272·5
4	45·7	46·5	46·0	50·4	48·5	46·7	46·5	46·8	48·9	51·1	53·5	56·9	59·7	59·6	58·7	58·6	57·8	56·5	55·6	54·7	52·9	51·3	51·3	53·3	52·4	257·5
5	52·2	51·9	47·7	47·9	47·2	47·2	46·7	47·1	48·3	52·2	55·9	59·2	61·3	59·7	59·1	57·8	56·7	52·6	53·1	53·1	53·6	52·8	51·9	46·8	52·6	262·0
6	50·4	51·7	51·0	52·4	49·6	49·4	48·4	46·6	46·6	48·8	52·2	56·8	60·0	60·4	58·8	56·9	55·4	53·8	52·5	51·2	52·1	52·1	49·9	49·6	52·4	256·6
7	49·5	49·5	48·5	43·0	49·2	43·5	41·0	40·2	44·8	50·7	51·4	54·1	56·7	57·4	56·8	55·7	54·7	53·4	52·2	52·2	52·3	52·2	52·3	52·1	50·6	213·4
8 *q*	52·0	51·9	51·1	50·8	49·0	47·2	44·8	43·3	44·4	47·1	49·5	52·4	55·9	58·4	58·4	55·9	55·2	53·9	52·0	51·7	48·5	52·5	52·7	52·5	51·3	231·1
9 *q*	53·3	52·1	51·7	51·1	50·9	50·9	50·3	49·6	49·1	50·0	52·4	54·0	57·1	58·1	58·3	57·3	55·8	54·3	52·9	52·3	52·2	52·2	52·2	52·7	52·9	270·8
10	52·3	52·0	51·3	50·2	48·5	46·0	44·8	44·1	46·0	47·9	51·1	55·3	58·0	58·4	59·2	56·3	53·7	53·1	52·3	52·7	52·4	51·5	51·8	52·9	51·7	241·8
11	55·7	50·2	50·0	49·7	50·2	48·2	47·2	44·9	46·2	48·5	51·4	55·2	57·9	57·9	59·8	59·2	57·3	55·7	53·8	53·5	53·9	53·4	46·6	48·4	52·4	256·6
12	51·2	52·1	55·9	54·5	47·6	46·2	45·0	45·1	46·2	49·4	53·3	55·7	58·5	59·7	59·8	58·4	57·6	56·0	53·2	50·0	52·5	48·2	47·3	49·4	52·2	252·8
13	50·6	50·3	52·3	52·9	44·0	42·2	46·8	45·9	46·8	48·7	51·7	54·7	58 5	57·9	58·3	56·9	55·1	53·8	52·0	52·4	51·9	51·1	49·6	51·6	51·5	236·0
14	52·1	53·2	51·4	50·6	49·5	48·3	47·5	46·7	46·7	50·1	54·7	59·0	61·6	62·5	62·4	60·9	58·2	56·8	54·8	50·5	49·0	49·4	47·8	45·3	52·9	269·0
15	43·1	44·6	46·5	50·3	49·7	48·7	47·6	47·5	48·3	50·0	52·9	56·0	59·1	60·8	60·0	59·7	59·2	57·0	55·7	53·8	52·9	52·9	51·4	49·5	52·4	257·2
16 *q*	48·8	50·8	50·8	49·9	48·2	47·7	47·4	46·0	47·2	49·6	51·3	54·6	57·2	58·6	58·7	57·9	56·5	55·5	54·9	53·8	53·7	50·4	49·7	49·8	52·0	249·0
17	53·0	43·9	45·7	44·7	45·2	48·2	47·9	47·5	47·6	49·6	52·4	55·9	58·8	59·3	59·6	58·6	57·0	56·4	55·1	54·6	53·2	50·5	50·3	49·8	51·9	244·8
18	50·1	50·0	49·6	51·4	47·5	48·4	49·8	47·8	49·3	51·2	53·4	55·7	57·2	58·9	59·0	58·2	57·1	56·0	54·7	53·4	53·6	53·4	52·8	52·3	52·9	270·8
19	52·1	52·6	49·2	47·4	48·4	49·8	49·5	48·1	47·8	48·2	50·6	55·0	58·1	59·3	58·3	58·3	56·5	54·8	53·2	52·5	53·0	52·6	53·1	53·0	52·6	261·4
20 *q*	54·6	56·4	52·9	49·7	47·5	45·6	43·5	43·5	45·1	47·2	52·1	56·9	59·7	60·1	58·8	56·1	54·0	52·8	52·4	52·2	51·6	50·0	52·3	52·8	52·0	247·8
21	52·9	53·2	51·4	49·6	48·4	46·6	44·6	44·9	46·6	49·3	52·2	55·9	59·2	60·3	59·6	58·3	56·7	54·3	53·0	51·5	51·4	52·4	52·3	51·6	52·3	256·2
22 *q*	53·6	51·9	50·2	51·1	50·0	47·7	45·2	43·8	45·6	48·5	52·9	56·7	59·6	60·7	60·3	57·5	54·6	52·4	51·5	51·9	52·3	52·7	53·0	53·1	52·4	256·8
23	52·3	52·0	51·4	50·6	49·1	46·3	45·0	44·8	47·7	51·7	55·7	58·6	61·0	61·7	60·8	59·4	57·7	57·0	54·8	54·0	54·4	51·1	50·5	51·1	*53·3*	278·7
24	50·6	50·4	50·3	50·4	48·3	45·8	45·2	45·7	47·5	50·9	54·6	59·4	61·6	60·6	58·5	56·7	55·3	54·3	56·2	55·9	55·1	55·7	54·7	53·9	53·2	277·6
25 *d*	51·1	50·5	50·6	49·9	48·2	47·2	46·9	48·3	48·8	50·4	53·9	59·1	62·9	62·3	69·0	70·6	67·8	67·5	65·6	62·1	59·4	36·6	2·4	20·7	52·2	251·8
26 *d*	6·2	−13·5	14·6	19·2	45·0	45·0	38·4	43·1	52·8	50·1	51·6	52·7	53·4	51·3	51·3	52·7	53·4	53·1	53·4	53·9	53·8	53·1	52·0	52·1	*43·3*	38·7
27	47·8	49·4	50·8	50·0	43·4	41·7	39·4	39·4	42·0	44·1	47·2	50·5	54·2	55·7	56·4	56·3	56·1	55·1	51·6	53·3	51·0	50·9	50·0	46·8	49·3	183·1
28 *d*	48·3	49·5	49·9	49·6	49·9	47·4	44·7	50·9	51·3	47·6	52·0	56·1	57·1	60·5	59·3	61·0	56·6	56·5	55·4	52·0	48·2	48·2	43·6	36·1	51·3	231·7
29 *d*	40·3	45·8	48·5	62·0	54·2	63·6	54·9	48·1	47·2	48·5	48·4	51·2	50·3	52·2	52·6	55·1	54·4	53·5	54·0	53·1	52·3	51·8	51·9	52·2	51·9	246·1
30	51·8	51·4	49·7	46·8	47·4	46·5	45·3	43·8	45·2	46·8	49·7	53·1	55·4	57·1	60·4	55·1	58·0	63·4	62·1	51·0	45·0	53·3	44·9	42·9	51·1	226·1
31	39·2	29·4	38·4	40·7	48·7	52·2	50·9	44·7	44·3	46·3	50·2	52·6	54·1	54·8	54·9	54·6	54·5	54·9	53·1	52·5	52·1	52·0	51·0	50·7	49·0	176·8
Mean	48·7	48·0	48·8	49·1	48·8	48·0	46·5	*45·7*	47·2	49·2	52·1	55·5	58·0	58·8	*58·9*	57·9	56·5	55·4	54·2	52·9	52·0	50·9	48·9	48·9	51·7	
Sum 1400·0′+	109·0	87·0	113·2	122·9	114·9	87·1	40·4	17·3	62·5	124·0	216·4	321·9	396·8	423·3	424·3	394·5	350·4	316·6	279·4	240·3	210·7	179·6	115·7	116·3		Grand Total 38464·5

GEOMAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 10,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	475	474	471	468	469	474	472	473	470	468	459	455	456	460	460	464	470	472	476	470	478	484	479	452	469	1249
2	458	466	471	474	475	472	468	466	459	454	450	452	457	462	472	484	495	506	521	524	506	481	457	435	474	1365
3 *d*	407	367	360	326	320	364	384	417	435	449	469	487	558	557	586	614	592	598	559	540	503	490	481	462	472	1325
4	466	468	466	450	466	479	480	481	477	474	471	469	469	481	499	507	510	513	511	510	505	495	485	481	484	1613
5	466	458	457	460	462	468	472	476	477	472	466	459	458	465	474	481	487	503	504	499	492	488	485	480	475	1409
6	477	480	482	480	481	483	484	487	483	480	474	471	474	481	482	485	489	493	494	496	494	491	489	490	484	1620
7	485	473	458	452	436	435	444	454	459	465	472	477	481	483	487	488	488	488	489	488	487	487	487	487	473	1350
8 *q*	487	487	487	487	488	488	486	484	482	479	474	470	473	479	485	491	496	502	505	499	499	491	486	485	487	1690
9 *q*	485	483	483	484	485	484	483	476	469	467	466	462	463	469	476	481	485	488	488	485	484	483	482	481	479	1492
10	483	483	483	485	487	488	487	483	478	472	463	459	463	472	479	491	498	492	487	486	486	484	482	481	481	1552
11	469	463	465	465	465	471	477	480	477	474	470	469	470	475	481	486	486	487	488	484	480	481	485	480	476	1428
12	481	480	474	454	460	474	479	481	477	470	463	456	457	463	472	477	483	489	497	501	494	490	479	472	476	1423
13	476	477	476	451	455	466	470	470	469	459	452	450	454	465	476	483	488	492	492	488	488	485	482	476	473	1340
14	475	465	474	476	480	481	482	482	476	467	461	450	448	458	472	484	492	499	505	505	498	489	484	478	478	1481
15	470	461	458	469	479	483	483	483	482	475	463	459	463	470	477	485	489	496	502	502	498	490	484	478	479	1499
16 *q*	472	473	475	476	478	480	476	476	473	467	459	453	455	462	470	475	476	479	481	485	487	486	483	481	474	1378
17	472	451	451	452	459	462	465	472	472	470	465	463	459	459	465	472	478	483	491	494	495	491	485	481	471	1307
18	475	476	476	469	470	474	470	471	471	468	459	452	450	456	463	470	476	479	482	483	481	479	477	477	471	1304
19	479	473	463	465	468	461	456	459	462	462	463	458	458	470	477	480	485	489	491	485	481	480	479	477	472	1321
20 *q*	476	465	463	471	477	477	476	474	472	466	457	450	454	460	472	485	490	490	487	487	487	487	481	480	474	1384
21	481	478	476	477	481	481	481	476	471	467	461	454	454	462	468	474	482	491	497	499	497	491	486	478	478	1463
22 *q*	471	466	473	477	483	485	484	482	479	471	459	450	449	456	465	472	478	482	483	481	479	478	478	478	473	1359
23	481	482	482	481	481	482	481	480	471	463	456	449	453	463	471	475	482	482	486	488	484	482	478	478	475	1411
24	478	478	479	480	483	482	480	477	469	454	443	440	449	460	470	475	480	480	477	488	487	484	482	480	473	1355
25 *d*	482	481	482	483	484	481	477	474	468	459	447	436	436	472	547	576	558	571	597	564	503	329	29	449	470	1285
26 *d*	248	114	248	192	155	213	371	468	478	506	531	566	576	616	603	561	544	537	532	521	518	518	522	511	*444*	649
27	506	512	507	490	496	505	511	512	505	493	488	487	496	511	515	514	517	520	527	517	508	506	484	473	504	2100
28 *d*	488	497	501	503	502	504	512	508	497	489	484	477	478	486	505	522	543	532	541	543	524	506	481	454	503	2077
29 *d*	419	376	396	351	354	369	414	454	483	507	518	520	538	548	537	527	523	520	518	514	515	513	509	503	476	1426
30	501	501	503	504	505	501	500	501	500	496	489	483	485	485	499	542	542	527	530	525	531	518	483	471	*505*	2122
31	422	362	292	390	430	418	427	481	500	503	502	498	497	500	503	506	508	510	514	512	510	508	506	505	471	1304
Mean	465	454	456	*453*	455	461	469	476	475	473	469	467	472	481	491	498	500	503	*505*	502	496	486	470	477	477	
Sum 14,000γ+	411	70	132	42	114	285	532	758	741	666	554	481	631	906	1208	1427	1510	1590	1652	1563	1379	1065	570	794		Grand Total 355,081

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — MAY 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1	2212 2244	19	2202 2244	18	2211 1033	13	0000 0123	6	1	13
2	2124 3444	24	2124 3444	24	2123 2333	19	2001 1233	12	1	13
3 *d*	5645 5553	38	5645 5553	38	5533 4542	31	4443 5443	31	2	13
4	3312 3223	19	2302 3223	17	3211 1113	13	1300 1102	8	1	13
5	3122 1323	17	2122 1321	14	3010 1203	10	2110 0221	9	1	13
6	2201 1212	11	2201 1212	11	1100 0012	5	0000 0000	0	0	13
7	3442 1111	17	3332 1111	15	3441 0000	12	3322 0000	10	1	13
8 *q*	1111 2321	12	1001 2321	10	0110 0121	6	0000 0011	2	1	13
9 *q*	1111 2201	9	1101 2201	8	1111 1000	5	0000 0000	0	0	13
10	1111 3221	12	1111 3221	12	0110 1211	7	0000 0000	0	1	13
11	4212 1323	18	4212 1323	18	3210 0003	9	2100 0001	4	1	13
12	3312 1233	18	3312 1233	18	3311 1033	15	2200 0012	7	1	13
13	3422 2222	19	2322 2222	17	3421 2112	16	1200 1101	6	1	13
14	2111 3333	17	2101 3333	16	2110 2133	13	1011 1212	9	1	13
15	3101 2132	13	2001 2131	10	3100 1012	8	2100 0102	6	1	13
16 *q*	2112 2322	15	2112 2322	15	2110 0002	6	0000 0000	0	1	13
17	4322 3322	21	3312 3322	19	4321 1112	15	3210 0112	10	1	13
18	2321 2221	15	2311 2221	14	1220 1011	8	0100 0000	1	1	13
19	3221 2210	13	3211 2210	12	3220 0100	8	2101 1100	6	1	13
20 *q*	2211 1122	12	2101 1122	10	2210 0012	8	2100 0000	3	0	13
21	1200 1232	11	0000 1232	8	1200 0021	6	0000 0001	1	0	13
22 *q*	2120 1100	7	2000 1100	4	2120 0000	5	1000 0000	1	0	13
23	1111 1233	13	1111 1233	13	0111 0122	8	0000 0010	1	1	13
24	2112 2442	18	2012 2442	17	1111 1121	9	0000 0010	1	1	13
25 *d*	2215 6769	38	2115 6769	37	1213 5448	28	0001 5458	23	2	13
26 *d*	9875 5444	46	9875 5444	46	8754 3222	33	7664 4322	34	2	13
27	3332 3443	25	3332 3443	25	3311 1133	16	2210 1023	11	1	13
28 *d*	2334 6654	33	2234 6654	32	2334 3444	27	2121 2334	18	2	13
29 *d*	6643 4322	30	6633 4322	29	5543 3211	24	4442 2000	16	2	13
30	2111 5555	25	1111 5554	23	2111 3455	22	0000 2324	11	1	13
31	5543 2442	29	5543 2442	29	5541 1221	21	3440 1100	13	1	13
								Mean	1·00	13

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0.16 CGS unit) + — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 21,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *q*	930	926	924	931	933	931	925	913	899	887	891	896	900	919	923	929	951	959	954	951	947	942	940	938	927	1239
2	939	938	940	936	939	940	940	933	918	914	914	916	919	937	939	938	942	961	967	979	956	952	950	942	940	1549
3	946	948	938	938	930	941	937	926	915	909	903	905	918	928	946	946	960	980	982	970	963	957	954	952	941	1592
4	950	959	948	950	951	947	941	930	920	915	917	924	935	940	962	989	1005	1007	996	974	956	958	970	936	953	1880
5 *d*	938	933	939	946	946	942	933	927	924	923	922	918	917	931	927	937	957	967	978	1055	1014	991	978	907	948	1750
6 *d*	734	610	778	923	923	901	897	895	886	883	891	900	915	925	933	928	923	938	969	975	965	963	929	926	*896*	510
7	901	847	906	916	919	923	899	888	893	886	884	898	912	920	923	933	935	937	940	941	942	944	948	950	916	985
8	947	947	945	945	946	948	942	937	925	906	869	897	917	953	928	952	948	964	965	962	999	961	940	942	941	1585
9	948	943	933	926	942	941	934	919	910	914	902	906	912	942	946	949	960	957	964	963	964	955	970	960	940	1560
10	939	938	950	950	946	946	934	921	908	913	911	913	926	942	955	966	962	959	968	966	986	962	961	957	944	1659
11	948	948	951	948	954	952	946	935	931	931	928	922	930	939	958	964	961	989	986	970	956	957	953	951	950	1808
12	949	950	948	954	950	947	946	940	941	930	920	912	917	921	936	966	971	963	965	975	971	967	970	964	949	1773
13	962	959	965	970	970	967	959	948	936	932	927	926	921	930	940	948	959	973	981	974	968	976	970	970	955	1931
14	967	975	963	963	963	959	956	946	946	937	923	918	918	922	950	962	958	975	980	985	972	964	967	959	955	1928
15	958	968	937	946	943	950	951	936	927	919	916	922	935	950	960	963	968	963	964	967	968	963	963	960	950	1797
16	958	957	959	958	959	958	952	942	932	919	913	925	931	942	954	976	964	981	975	975	974	971	970	967	955	1912
17	962	964	959	952	955	959	954	948	941	929	925	923	929	938	967	970	992	972	975	971	968	968	969	964	956	1954
18 *q*	948	944	950	945	948	947	942	938	937	935	937	941	942	947	957	965	971	969	968	969	970	969	967	963	953	1869
19	962	959	960	962	961	961	956	950	945	941	939	941	954	956	974	979	962	965	968	975	975	972	971	972	961	2060
20 *q*	969	967	987	968	962	956	946	940	938	932	929	935	941	950	963	969	965	967	966	967	966	969	969	970	957	1971
21	969	969	966	966	966	963	959	956	946	936	940	944	948	958	973	966	977	977	968	973	974	968	963	959	962	2084
22	958	958	959	960	959	957	948	947	943	930	921	931	926	929	950	949	956	970	976	976	974	968	968	969	953	1882
23 *q*	968	966	967	967	969	965	958	945	934	928	928	933	936	946	958	968	980	979	979	984	983	979	965	959	960	2044
24 *q*	955	962	964	965	963	958	953	951	944	937	932	929	927	932	937	952	966	977	983	983	973	972	977	976	957	1968
25 *d*	968	963	975	988	989	983	971	975	976	965	951	928	931	928	945	976	988	1024	1037	1010	964	925	910	897	*965*	2167
26 *d*	861	920	936	950	939	939	949	937	923	909	904	909	923	939	951	992	982	963	976	985	985	973	952	947	943	1644
27 *d*	950	962	941	963	954	924	936	935	919	902	884	898	925	938	949	943	954	965	977	964	960	960	963	967	943	1633
28	971	952	953	958	960	959	951	941	927	917	904	903	912	934	947	960	975	968	975	977	964	954	953	953	949	1768
29	954	952	952	953	958	948	926	937	939	934	924	917	913	919	931	952	979	952	960	969	967	969	960	972	947	1737
30	964	951	952	955	953	948	936	919	945	939	921	928	937	953	949	963	973	973	985	986	975	970	975	974	955	1924
Mean	942	938	944	952	952	949	943	935	929	922	*916*	919	926	937	948	958	965	970	974	*976*	969	963	960	954	947	
Sum 27,000γ+	1273	1135	1325	1552	1550	1460	1277	1055	868	652	470	558	767	1108	1431	1750	1944	2094	2227	2271	2079	1899	1795	1623		Grand Total 682,163

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *q*	50·3	49·7	49·2	49·6	48·1	47·0	45·6	44·5	44·2	46·2	49·4	53·1	55·9	57·6	56·3	55·4	55·4	54·8	53·4	51·9	51·8	51·8	51·8	51·3	51·0	124·3
2	51·4	51·1	49·8	48·4	47·6	44·8	44·9	44·6	44·9	46·5	50·9	53·9	55·8	59·2	58·6	57·2	55·1	53·8	51·8	48·9	49·6	50·4	50·8	51·0	50·9	121·0
3	52·8	54·4	53·6	52·0	49·4	48·2	45·2	45·3	46·6	48·5	50·1	53·7	55·9	58·4	59·5	58·2	56·5	54·4	51·7	52·0	52·0	52·0	51·7	51·0	52·2	153·1
4	51·1	51·0	48·5	49·0	48·0	46·3	44·2	42·9	42·7	44·6	48·3	53·1	57·6	59·6	60·2	58·5	59·2	58·3	54·8	52·7	51·8	50·4	46·9	46·4	51·1	126·1
5 *d*	47·1	48·5	50·3	49·8	48·2	46·8	45·4	45·3	46·5	49·2	53·7	56·8	60·7	61·9	62·4	60·9	59·2	56·5	54·7	49·5	45·5	53·0	53·4	41·4	51·9	146·7
6 *d*	22·2	38·9	24·8	39·0	44·1	43·8	43·7	43·6	45·2	48·2	51·6	54·6	58·2	58·5	56·7	55·1	53·1	52·9	54·1	53·7	53·6	51·2	44·6	46·1	*47·4*	37·5
7	38·0	43·1	39·7	38·5	37·9	40·6	42·5	46·5	46·8	47·8	51·8	55·8	59·6	60·8	59·2	57·8	55·7	53·7	52·5	51·9	51·9	52·0	51·9	51·7	49·5	87·7
8	50·7	50·7	50·1	49·2	48·0	46·3	43·8	43·2	43·2	46·4	50·2	57·3	58·5	62·0	61·1	60·3	58·1	56·5	54·3	53·0	49·2	44·1	46·2	47·6	51·3	130·0
9	48·0	48·9	52·0	55·2	52·4	48·6	45·7	45·7	47·1	48·8	51·8	53·1	55·3	56·8	57·0	56·1	56·1	54·9	54·9	53·3	51·2	51·0	49·6	50·5	51·8	144·0
10	48·2	51·8	49·9	47·4	47·7	48·0	45·6	45·0	44·7	46·1	47·8	52·1	55·8	58·1	58·5	58·9	57·2	55·0	53·9	53·1	52·8	51·2	51·3	51·1	51·3	131·2
11	50·3	50·1	50·5	50·1	48·5	46·5	46·9	47·0	46·5	47·3	49·9	54·1	58·5	60·7	62·0	61·1	58·6	57·4	54·7	50·2	52·2	52·8	52·7	51·8	52·5	160·4
12	51·2	51·6	51·3	50·0	48·1	47·1	47·0	46·2	46·5	47·4	49·2	53·6	58·0	59·7	58·8	58·3	56·5	54·9	53·3	53·5	53·2	52·7	52·6	51·6	52·2	152·3
13	51·7	50·5	47·4	49·4	48·1	46·5	46·3	46·8	47·3	49·2	52·6	56·2	58·0	59·0	59·5	59·1	57·8	56·4	54·9	52·9	53·1	51·8	51·7	51·5	52·4	157·7
14	50·8	52·4	52·0	49·9	47·2	46·1	45·4	45·8	47·2	48·8	51·4	54·5	58·3	60·6	60·5	60·1	58·5	57·3	54·9	53·2	52·2	52·7	50·9	50·1	52·5	160·8
15	49·0	43·6	45·2	45·8	46·9	46·3	44·8	45·3	47·2	49·7	52·1	54·9	56·8	56·9	56·0	54·9	54·9	55·0	55·5	54·7	53·9	53·0	52·7	51·7	51·1	126·8
16	51·8	50·9	50·6	49·5	49·1	48·1	47·4	47·0	47·9	49·2	51·4	53·1	55·8	55·8	55·7	56·6	54·9	54·7	54·2	54·6	54·5	53·8	53·0	52·8	52·2	152·4
17	51·2	51·7	50·8	49·2	47·8	46·6	45·2	46·6	47·8	49·4	53·9	57·0	57·9	57·6	58·7	57·1	54·9	53·9	55·3	54·9	53·8	53·3	53·6	51·4	52·5	159·6
18 *q*	47·4	50·0	50·5	49·4	48·7	48·6	47·3	47·8	48·4	49·0	50·6	53·5	56·0	57·0	57·1	56·5	55·6	54·5	54·2	53·3	52·8	52·2	51·8	51·9	51·8	144·1
19	51·6	50·6	50·1	50·2	48·9	47·1	45·3	44·6	45·8	47·4	50·7	54·5	58·1	58·8	59·4	58·8	57·2	56·4	55·6	54·5	54·0	53·4	53·0	52·7	52·4	158·7
20 *q*	51·8	51·1	50·3	49·6	47·4	45·3	44·6	45·7	46·7	48·0	50·5	52·9	55·6	56·7	57·1	57·1	55·8	54·0	52·6	52·2	52·2	52·8	52·6	52·3	51·5	134·9
21	51·7	51·5	51·1	50·9	50·0	49·0	46·7	45·7	45·5	47·5	51·6	56·1	59·8	60·7	59·9	58·1	57·2	55·5	53·8	53·1	53·7	53·1	53·1	51·4	*52·8*	166·7
22	51·4	51·2	50·8	50·2	48·4	45·7	45·2	46·0	47·8	48·6	52·9	57·1	60·1	61·4	61·5	60·2	57·6	54·9	53·3	52·6	52·6	52·7	52·5	52·0	*52·8*	166·7
23 *q*	51·8	51·6	52·0	50·9	49·3	48·2	46·4	45·6	45·7	48·4	53·1	56·2	58·2	58·6	57·8	57·3	55·7	53·8	53·8	53·9	53·5	52·2	52·5	51·1	52·4	157·6
24 *q*	50·8	50·9	49·7	49·2	48·6	47·1	47·5	46·7	46·4	46·9	48·5	51·2	54·7	57·0	57·7	57·4	56·7	55·8	54·4	52·9	52·1	52·2	51·9	50·4	51·5	136·7
25 *d*	50·1	50·8	50·8	49·2	48·1	47·3	48·9	48·0	47·0	47·8	49·3	52·0	55·8	59·2	61·0	61·3	60·1	59·1	58·5	52·9	47·5	47·3	47·1	42·7	51·7	141·8
26 *d*	43·0	45·5	51·0	50·1	49·1	46·7	44·6	43·9	46·1	48·8	51·6	53·9	57·4	59·4	60·2	63·3	61·1	57·4	56·6	55·4	53·6	49·3	49·1	48·0	51·9	145·1
27 *d*	47·4	45·5	38·7	39·6	37·9	39·1	43·7	42·7	43·3	46·7	52·5	53·0	56·2	57·7	58·5	57·3	56·7	55·6	54·8	53·8	51·2	53·6	53·1	52·5	49·6	91·1
28	49·3	47·6	49·2	50·0	48·3	47·2	46·6	47·5	48·0	47·9	51·6	55·8	57·7	59·4	60·3	59·7	58·5	55·0	54·0	51·1	50·6	52·8	52·6	51·9	52·2	152·6
29	51·0	50·3	50·0	49·5	49·7	48·1	50·9	50·1	47·1	46·3	47·4	50·7	54·5	55·7	56·6	57·1	55·1	55·1	54·5	53·9	53·2	52·8	51·4	52·0	51·8	143·0
30	46·5	45·5	49·0	48·4	47·9	46·2	44·3	44·9	47·1	46·5	49·0	54·1	56·9	59·3	58·6	58·9	58·5	56·9	55·6	53·5	53·8	53·3	52·1	46·1	51·4	132·9
Mean	48·7	49·4	48·6	48·6	47·7	46·4	45·7	*45·7*	46·2	47·8	50·9	54·3	57·3	58·8	*58·9*	58·3	56·9	55·5	54·3	52·9	52·1	51·8	51·3	50·1	51·6	
Sum 1300·0′+	159·6	181·0	158·9	159·2	129·4	93·2	71·6	70·5	87·2	133·1	225·4	327·9	417·6	464·1	466·4	448·6	407·5	364·4	330·6	287·1	263·1	254·9	238·2	204·0		Grand Total 37143·5

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *q*	504	504	504	503	506	507	508	507	503	499	489	481	485	491	498	501	505	507	508	506	504	503	501	501	501	1025
2	501	498	496	497	499	501	498	498	497	492	485	479	479	486	496	510	513	514	514	515	514	509	504	498	500	993
3	494	486	486	487	497	499	504	504	501	492	489	487	485	489	496	500	504	510	518	513	507	503	501	500	498	952
4	499	493	492	496	497	498	498	501	499	490	479	475	479	487	500	514	532	546	550	543	533	516	494	486	*504*	1097
5 *d*	485	490	491	492	497	499	499	496	493	489	481	477	479	486	492	499	503	514	516	505	496	486	479	392	489	736
6 *d*	264	238	300	451	496	511	515	517	521	522	519	510	504	506	510	514	515	514	513	519	524	523	514	499	480	519
7	467	391	407	423	436	462	476	482	488	493	495	489	490	495	501	504	506	507	506	504	503	501	500	500	480	526
8	503	503	503	503	503	502	503	498	495	490	483	478	482	492	508	514	523	521	522	520	506	494	490	490	501	1026
9	489	486	485	472	469	471	484	488	493	489	487	490	494	497	502	503	505	506	505	504	505	505	495	470	491	794
10	474	478	478	486	491	495	497	498	497	492	491	484	479	485	492	497	500	497	501	504	503	503	500	497	492	819
11	497	496	496	496	494	495	496	495	493	489	486	484	482	485	486	490	492	494	507	514	510	502	499	497	495	875
12	497	496	495	493	496	497	496	492	486	484	478	473	479	487	495	501	510	512	508	503	500	497	495	495	494	865
13	496	493	491	490	492	493	492	490	486	486	485	481	475	479	486	493	497	498	501	503	500	495	494	492	491	788
14	490	485	478	473	479	485	490	492	489	490	487	483	485	483	487	497	507	513	514	515	514	507	489	485	492	817
15	469	446	456	472	485	492	494	497	497	493	490	488	486	490	494	498	497	499	497	497	497	497	497	497	489	725
16	494	494	493	494	497	497	497	497	496	490	485	481	487	491	492	493	497	502	503	503	502	497	490	490	494	862
17	491	490	490	491	493	493	490	482	480	478	475	474	474	479	490	503	514	520	514	511	504	499	497	490	493	822
18 *q*	479	483	486	493	496	496	496	497	491	485	484	483	484	488	492	491	493	496	497	497	496	496	493	493	491	785
19	492	492	491	491	491	491	490	491	490	482	473	467	469	474	477	488	504	508	507	503	499	496	496	495	490	757
20 *q*	494	491	491	492	495	496	493	490	487	483	472	468	473	481	482	491	492	494	494	495	493	492	491	491	488	721
21	492	492	493	494	496	497	497	496	496	492	485	478	480	481	486	493	497	501	504	502	499	499	498	495	493	843
22	494	494	494	495	498	497	493	487	486	482	471	460	457	464	477	487	493	497	498	495	493	492	490	489	487	683
23 *q*	489	490	489	491	492	491	489	490	489	482	475	467	472	478	485	491	493	494	494	493	491	492	492	492	488	701
24 *q*	493	491	490	492	494	493	488	484	487	488	484	476	469	473	482	484	489	494	495	494	492	492	488	488	487	700
25 *d*	487	487	487	487	487	489	488	483	478	476	473	466	462	463	469	475	483	493	512	536	533	505	504	476	487	699
26 *d*	338	401	418	464	488	499	500	500	501	501	497	489	482	484	487	489	502	511	505	500	505	507	493	489	481	550
27 *d*	480	444	425	412	404	424	446	469	482	487	489	480	478	486	491	498	498	501	505	509	510	501	495	493	*475*	407
28	484	482	488	494	496	497	496	497	495	486	482	471	477	487	496	496	506	514	511	511	510	501	497	494	495	868
29	495	494	494	494	494	494	490	489	492	490	488	484	484	489	493	499	507	515	511	504	498	497	496	493	495	884
30	484	475	478	486	489	493	494	495	483	473	474	475	476	480	489	495	500	505	511	510	503	498	491	482	489	739
Mean	477	*473*	475	483	488	492	493	493	492	489	484	479	480	485	491	497	503	507	*508*	508	505	500	495	488	491	
Sum 14,000γ+	315	183	265	504	647	754	797	802	771	665	531	378	387	536	731	908	1077	1197	1241	1228	1144	1005	863	649		Grand Total 353,578

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — JUNE 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1 *q*	1102 2120	9	1102 2120	9	0100 0000	1	0000 0000	0	0	13
2	1212 2432	17	1012 2432	15	1210 1221	10	0000 0100	1	1	13
3	2211 2332	16	2211 2332	16	2210 1211	10	1100 0100	3	1	13
4	2012 4344	20	2002 4344	19	2011 2213	12	1000 0223	8	1	13
5 *d*	2113 3366	25	1013 3366	23	2111 1154	16	0000 0024	6	1	13
6 *d*	7311 3344	26	7311 3344	26	6311 1124	19	6511 0013	17	2	13
7	5331 1111	16	5321 1111	15	4331 0000	11	5311 0000	10	1	13
8	0113 4343	19	0113 4343	19	0112 2233	14	0001 0120	4	1	13
9	3322 3224	21	2322 3224	20	3311 0113	13	0110 0103	6	1	13
10	3121 1121	12	2121 1121	11	3110 0001	6	1101 0000	3	0	13
11	0201 2331	12	0101 2331	11	0200 0030	5	0000 0110	2	1	13
12	0112 3322	14	0112 3322	14	0110 1001	4	0000 0000	0	1	13
13	3121 2221	14	2111 2221	12	3120 0011	8	0000 0000	0	0	13
14	3322 4333	23	2222 4333	21	3320 2123	16	2200 0102	7	1	13
15	4221 2221	16	4211 2221	15	3220 1001	9	3200 0000	5	1	13
16	1022 2321	13	1012 2321	12	0021 1111	7	0000 0101	2	1	14
17	2122 3423	19	2122 3422	18	1011 1313	11	0010 1212	7	1	14
18 *q*	3111 1211	11	2111 1211	10	3010 0001	5	0010 0000	1	0	14
19	1000 3320	9	1000 3320	9	0000 1200	3	0000 0110	2	1	13
20 *q*	1221 1111	10	1021 1111	8	1220 0000	5	0010 0000	1	0	13
21	1121 2222	13	1121 2222	13	0120 0111	6	0000 0000	0	0	13
22	0223 3110	12	0123 3110	11	0221 1000	6	0000 0000	0	1	13
23 *q*	0200 1113	8	0000 1113	6	0200 0111	5	0000 0000	0	0	13
24 *q*	1111 1121	9	1001 1121	7	1110 0001	4	0000 0000	0	0	13
25 *d*	3222 2454	24	3222 2454	24	2221 1234	17	0000 0134	8	1	13
26 *d*	5322 3433	25	5322 3433	25	5322 1322	20	5300 0212	13	1	13
27 *d*	4433 2332	24	3433 2332	23	4312 1022	15	4331 0011	13	1	13
28	3212 2231	16	3112 2230	14	2212 1131	13	1001 1211	7	1	14
29	1231 2322	16	1221 2322	15	0231 1201	10	0000 0110	2	1	13
30	3233 3333	23	3233 3333	23	3221 1123	15	2110 0112	8	1	13
								Mean	0·77	13

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — JULY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 22,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	952	943	951	954	945	945	947	919	911	907	911	908	905	919	938	954	961	991	994	977	973	959	953	951	945	668
2	951	950	958	953	956	950	940	933	925	917	917	920	929	931	937	947	957	966	971	973	965	961	959	965	947	731
3 *q*	964	964	962	960	960	958	949	943	932	918	915	918	928	937	951	960	969	973	982	982	971	972	967	966	954	901
4	958	962	961	958	957	955	956	955	945	935	932	930	934	948	961	976	984	977	970	970	971	972	971	977	959	1015
5 *d*	964	962	964	949	958	960	954	939	904	912	939	949	955	956	981	963	954	960	958	965	972	960	967	956	954	901
6	951	947	947	947	945	941	936	932	929	929	936	945	956	970	963	975	988	984	977	968	977	964	953	947	954	907
7	956	978	938	949	935	950	947	939	932	928	921	916	933	953	964	975	972	974	974	973	968	966	963	962	953	866
8	963	962	959	961	962	962	959	957	951	947	932	934	956	971	982	978	974	965	960	961	964	966	966	964	961	1056
9 *q*	962	961	962	964	968	964	958	954	949	947	942	941	943	955	955	961	969	977	985	981	978	970	969	968	962	1083
10 *q*	965	965	966	969	972	970	965	957	947	937	937	938	946	962	972	981	985	984	987	990	991	993	989	988	*969*	1256
11 *d*	998	972	978	992	982	968	951	956	965	960	960	949	956	953	947	955	984	973	984	998	975	968	965	962	969	1251
12	963	957	956	953	962	959	951	941	934	933	928	928	934	937	947	959	976	980	983	979	976	972	965	963	956	936
13	961	960	957	960	965	959	957	951	943	935	930	931	935	950	959	968	972	977	982	989	984	970	972	975	960	1042
14	963	959	962	959	951	956	959	943	923	921	929	931	943	952	972	975	975	984	989	980	978	978	963	962	959	1007
15	961	960	962	963	963	960	951	950	943	936	934	937	950	957	969	981	970	987	1009	1017	993	975	971	969	965	1168
16	962	959	952	955	961	957	954	946	945	942	936	938	946	952	968	974	971	971	976	977	978	968	967	967	959	1022
17	961	962	962	963	964	959	948	938	936	942	942	950	959	961	957	960	969	979	983	992	997	983	985	982	964	1134
18	980	975	971	975	971	960	967	967	954	940	938	948	932	947	963	976	967	972	982	976	968	966	968	968	964	1131
19	957	960	963	962	964	959	950	940	933	935	935	941	947	944	957	967	976	984	990	989	981	977	968	965	960	1044
20	969	966	962	968	970	969	964	958	941	934	939	947	957	966	976	991	976	984	979	979	982	975	972	968	966	1192
21	966	973	974	969	968	961	952	944	940	934	936	941	945	950	955	967	969	972	983	986	979	974	972	973	962	1080
22 *q*	972	970	969	971	969	966	959	958	953	946	934	933	937	952	963	973	978	985	979	979	982	979	980	978	965	1165
23 *d*	972	976	974	975	974	974	971	965	955	944	943	939	936	963	975	986	994	989	998	1021	1002	971	923	927	969	1247
24	953	954	957	963	962	954	942	933	933	931	918	916	919	925	932	948	963	983	995	1002	977	972	965	967	953	864
25	961	956	959	961	960	961	957	956	950	929	906	904	928	949	956	972	977	1008	1023	995	987	976	967	972	961	1070
26	964	969	961	958	963	964	959	950	938	923	908	910	925	940	949	975	960	964	968	972	971	969	967	964	954	891
27	966	965	963	967	968	969	961	954	944	932	933	931	934	939	948	957	965	971	972	980	983	975	974	976	959	1027
28	990	971	961	964	964	967	962	956	947	935	926	929	936	944	972	977	987	1000	974	992	993	982	982	981	966	1192
29	979	974	980	967	952	975	971	953	938	929	920	916	930	941	947	958	954	987	1004	994	982	974	968	952	960	1045
30 *d*	951	959	964	976	962	914	919	933	923	908	907	912	924	934	941	948	954	962	969	965	955	951	952	952	*943*	635
31 *q*	952	949	949	946	946	942	936	929	925	923	926	925	931	939	946	948	948	952	964	964	962	959	959	958	945	678
Mean	964	963	961	962	961	958	953	947	938	932	*929*	931	938	948	958	967	971	978	982	*983*	978	971	967	965	959	
Sum 28,000γ+	1887	1840	1804	1831	1796	1708	1552	1349	1088	889	810	855	1089	1397	1703	1985	2098	2315	2444	2466	2315	2097	1962	1925		Grand Total 713,205

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — JULY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1200·0'+
	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'	'
1 *d*	46·8	47·8	47·1	45·1	45·6	47·1	47·3	48·3	51·3	53·9	54·3	55·6	57·1	58·7	58·4	57·4	56·9	53·6	53·3	53·6	52·7	51·6	50·6	51·9	51·9	46·0
2	48·1	49·0	50·4	50·4	46·6	44·2	44·2	45·5	46·6	48·5	51·8	54·4	56·4	56·2	55·0	54·5	53·5	53·1	53·6	54·4	53·6	53·0	52·8	52·7	51·2	28·5
3 *q*	50·9	50·2	50·9	50·3	49·4	46·7	45·2	45·1	46·2	48·1	51·9	55·6	59·0	59·8	58·4	55·8	53·4	52·2	52·5	51·3	52·0	53·1	52·5	51·1	51·7	41·6
4	50·1	50·8	49·5	47·6	46·6	46·3	45·8	46·3	46·7	47·4	50·0	53·4	56·6	58·3	58·3	57·8	56·7	54·7	53·0	52·0	52·9	53·0	52·7	51·9	51·6	38·4
5 *d*	47·6	47·1	42·2	40·8	40·5	41·8	46·4	48·3	50·3	53·1	53·1	55·6	59·6	61·1	59·6	58·8	57·3	55·3	53·6	53·1	52·6	50·6	49·9	51·0	51·2	29·3
6	50·2	49·2	49·0	48·3	47·5	47·8	48·1	48·4	49·4	50·3	51·0	51·7	55·3	56·4	55·0	55·7	55·8	54·5	53·7	52·1	54·1	51·6	51·3	45·3	51·3	31·7
7	48·5	47·8	47·0	51·2	53·1	47·4	45·4	44·3	44·9	47·5	50·7	52·2	54·9	57·3	58·3	57·4	55·9	54·0	53·2	52·9	53·0	53·1	52·7	51·4	51·4	34·1
8	51·7	51·4	50·1	49·4	50·2	48·2	46·7	46·5	46·3	47·3	49·3	52·5	55·9	58·8	58·3	56·7	55·1	52·9	51·9	51·8	51·8	51·8	52·0	52·1	51·6	38·7
9 *q*	51·4	51·1	51·2	51·1	49·6	47·6	46·9	47·0	46·4	47·0	50·3	54·4	57·1	58·5	58·8	57·8	56·3	55·1	54·0	53·0	52·3	51·9	52·2	51·9	52·2	52·9
10 *q*	51·1	50·5	50·4	49·9	48·9	47·6	47·4	47·2	46·4	46·8	49·4	53·1	56·9	58·5	59·1	58·6	56·9	55·7	54·7	54·3	54·4	54·0	52·6	51·5	52·3	55·9
11 *d*	52·8	47·2	45·2	47·2	45·2	43·8	44·7	43·9	47·6	49·2	50·1	53·4	58·7	63·3	63·2	62·2	60·2	56·2	53·4	53·1	50·2	48·9	50·3	49·4	51·6	39·4
12	48·8	48·0	47·5	52·2	50·3	47·4	46·0	44·6	46·1	46·9	49·3	52·0	54·9	57·2	58·6	58·3	56·9	54·5	52·3	51·7	51·1	50·9	51·3	51·6	51·2	28·4
13	51·0	51·1	50·1	49·5	48·8	46·6	45·2	44·9	45·5	48·2	51·6	54·9	57·6	59·9	59·5	58·3	56·1	54·0	53·1	50·8	50·2	52·3	50·8	49·1	51·6	39·1
14	49·2	50·2	49·9	47·5	49·0	48·1	45·5	44·6	46·5	48·1	51·0	53·7	57·4	58·2	57·5	56·7	55·3	54·6	54·2	53·1	52·3	52·7	51·1	51·2	51·6	37·6
15	51·0	50·3	49·9	48·8	48·4	47·5	46·1	46·5	47·1	47·6	50·4	52·7	55·8	58·3	59·6	60·0	57·6	54·5	56·4	56·6	54·9	50·4	52·5	52·1	52·3	55·0
16	51·2	50·0	49·8	49·0	48·1	45·3	45·2	45·5	45·8	49·3	52·8	55·7	57·3	57·9	57·1	55·5	54·0	53·5	53·0	53·1	53·5	52·9	51·8	51·5	51·6	38·8
17	50·8	49·5	48·4	48·3	47·8	46·1	45·2	45·8	47·9	49·1	52·6	54·9	56·8	58·0	58·3	58·5	57·8	56·7	54·9	54·0	55·3	53·4	52·9	52·1	52·3	55·1
18	50·8	50·3	49·2	48·9	46·6	44·7	44·7	44·8	48·0	51·8	56·6	58·5	59·2	58·9	57·6	55·1	55·4	54·5	53·1	52·7	52·1	52·1	51·7	51·7	51·7	42·0
19	49·4	53·7	50·8	48·7	46·8	45·9	46·3	47·5	49·1	50·4	52·8	54·5	55·9	57·6	57·8	56·4	55·7	54·7	54·3	54·1	53·4	52·6	52·4	51·9	52·2	52·7
20	52·4	51·2	50·1	50·2	50·3	48·0	46·5	45·2	43·9	45·8	49·7	54·7	58·1	59·1	57·5	57·3	55·7	54·5	53·0	52·1	52·0	50·0	51·2	51·0	51·6	39·5
21	51·4	51·2	50·7	50·2	47·2	44·6	43·7	44·2	46·0	48·7	52·7	55·6	58·7	61·1	61·1	60·1	57·9	55·4	53·5	53·2	52·6	53·0	52·8	52·8	52·4	58·4
22 *q*	51·6	50·6	50·3	49·6	47·8	46·3	45·2	45·0	46·3	49·1	51·5	55·2	59·0	62·4	62·8	60·7	58·9	56·4	53·7	53·0	53·0	52·6	51·6	50·8	*52·6*	63·4
23 *d*	50·6	50·6	50·2	49·7	47·4	45·9	45·3	45·5	45·3	46·9	50·2	55·1	58·7	61·6	62·4	61·4	59·8	56·4	54·0	54·0	53·8	44·8	39·2	44·4	51·4	33·2
24	46·1	47·7	49·4	47·2	46·3	43·7	44·9	45·3	44·5	45·7	50·1	53·8	56·9	58·6	59·1	58·3	56·5	54·9	52·2	48·9	52·1	52·5	52·2	52·6	50·8	19·5
25	51·4	50·8	50·1	48·6	47·3	44·5	43·0	44·0	45·1	47·8	52·4	56·2	60·5	61·1	60·2	59·1	57·8	57·1	53·9	53·6	51·9	51·4	52·7	53·5	52·3	54·0
26	49·0	48·5	50·2	48·2	48·7	47·0	46·3	46·1	45·8	46·5	49·6	53·5	58·2	60·6	61·1	60·4	56·2	54·1	52·7	52·6	52·6	51·9	51·7	51·2	51·8	42·7
27	50·6	50·3	50·5	50·6	49·8	47·2	44·4	42·9	43·2	46·3	49·4	53·1	55·9	58·1	59·2	58·9	58·2	55·8	53·4	52·4	51·4	51·5	52·1	52·8	51·6	38·0
28	50·4	49·6	48·5	48·6	46·7	45·3	42·9	42·5	42·8	46·2	49·4	52·2	55·7	57·1	60·4	60·0	59·8	58·3	51·9	53·1	54·3	53·8	53·1	51·8	51·4	34·4
29	50·6	50·5	50·1	47·8	49·0	48·0	45·5	44·8	45·5	49·1	51·5	53·6	55·9	57·9	58·1	56·5	53·2	54·1	54·4	52·1	50·3	52·8	49·1	42·1	50·9	22·5
30 *d*	45·5	49·5	53·7	52·7	57·9	55·5	48·5	45·4	46·5	47·1	49·2	52·7	53·5	53·9	53·6	53·1	52·0	51·3	51·3	50·8	50·2	50·2	50·3	50·2	51·0	24·6
31 *q*	50·2	50·1	50·1	49·3	48·3	47·0	46·8	46·4	47·1	47·5	50·9	53·8	55·4	56·5	55·3	53·1	51·7	50·8	51·0	51·2	51·1	51·2	51·4	51·8	*50·7*	18·0
Mean	50·0	49·9	49·4	48·9	48·3	46·5	45·7	*45·5*	46·3	48·2	51·0	54·1	57·0	*58·7*	58·7	57·8	56·3	54·7	53·4	52·7	52·5	51·8	51·3	50·9	51·7	
Sum 1400·0'+	151·2	145·8	132·5	116·9	95·7	43·1	15·3	12·2	36·9	93·4	180·8	276·4	368·2	421·2	420·5	392·9	344·2	294·3	254·6	235·1	228·3	205·6	191·9	176·4		Grand Total 38433·4

GEOMAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — JULY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	483	482	480	482	485	482	478	480	484	485	486	486	488	497	513	523	533	538	536	527	523	515	503	498	*499*	987
2	484	475	460	466	469	476	483	486	485	487	484	477	480	485	493	499	503	504	504	501	498	496	495	494	487	684
3 *q*	494	493	490	492	494	497	499	496	493	488	481	475	471	477	486	494	498	500	500	500	500	498	497	494	492	807
4	494	493	492	492	493	493	493	493	489	482	476	469	466	474	480	486	492	501	503	498	494	492	491	489	489	725
5 *d*	487	482	469	464	463	464	470	476	476	465	466	471	477	496	516	523	520	515	511	503	499	502	497	490	488	702
6	491	493	493	494	494	495	493	493	493	487	477	471	475	486	498	501	511	513	515	510	501	501	489	483	494	857
7	481	455	453	448	444	454	474	481	484	482	480	478	478	484	490	494	500	501	502	502	500	499	498	498	482	560
8	492	487	489	491	492	490	489	488	487	485	485	475	470	477	489	494	496	498	498	495	493	493	492	493	489	738
9 *q*	493	494	494	494	496	497	498	496	493	489	483	482	480	482	484	487	494	496	498	494	493	493	492	492	491	794
10 *q*	492	491	492	494	495	494	496	491	490	486	480	472	465	465	469	477	484	489	490	489	488	487	489	491	486	656
11 *d*	481	458	464	473	482	487	487	482	474	466	464	458	460	471	483	492	497	506	505	505	508	508	497	493	483	601
12	489	489	488	484	484	488	489	491	488	484	476	469	469	474	479	486	491	494	500	503	501	494	489	488	487	687
13	488	483	482	488	493	494	493	490	484	481	476	475	475	476	482	489	494	499	501	500	500	494	490	486	488	713
14	482	483	484	485	488	486	482	482	480	476	471	471	474	476	486	491	494	494	498	499	498	493	489	489	485	651
15	489	487	488	489	493	493	487	483	480	473	469	466	470	475	480	487	493	498	498	499	497	504	495	493	487	686
16	492	490	493	487	479	476	476	476	476	475	473	472	471	480	485	490	498	498	495	494	493	493	491	490	485	643
17	490	489	488	490	492	495	494	493	487	482	475	469	471	475	481	483	483	492	493	493	491	492	488	487	486	673
18	487	487	488	489	491	491	484	482	482	479	475	469	472	473	476	485	496	499	499	497	493	491	489	489	486	663
19	490	484	482	486	488	489	489	486	481	475	475	475	477	482	485	491	493	493	493	492	492	493	492	490	486	673
20	486	485	487	488	488	489	488	486	484	479	476	465	463	468	474	483	493	492	490	487	486	489	488	488	483	602
21	488	484	481	483	486	489	481	476	478	472	467	463	469	477	486	489	493	494	495	494	493	491	489	487	484	605
22 *q*	483	485	486	487	489	489	487	486	482	477	471	469	470	477	481	481	484	489	493	489	486	483	483	483	483	590
23 *d*	486	486	486	486	489	486	482	477	476	478	476	466	460	459	466	473	481	487	492	489	496	495	478	479	480	529
24	472	476	480	483	488	493	497	495	490	484	476	475	471	467	475	487	494	500	507	510	501	494	490	490	487	695
25	489	488	488	488	493	492	492	490	489	489	486	478	470	471	477	489	498	505	519	519	512	504	494	484	492	804
26	478	476	475	475	482	484	489	488	487	487	486	479	471	472	482	493	499	500	498	493	491	490	489	489	486	653
27	490	490	489	490	494	494	494	492	493	491	485	480	476	471	474	481	487	494	498	494	494	491	489	487	488	718
28	478	472	479	483	488	489	490	490	484	478	475	471	469	469	471	487	498	506	515	504	494	489	487	486	485	652
29	482	482	482	482	483	469	469	476	482	477	475	474	472	472	479	484	496	504	505	507	505	499	485	472	484	613
30 *d*	464	444	418	437	441	422	434	463	479	483	481	473	470	480	491	494	496	496	497	498	498	495	493	493	*473*	340
31 *q*	492	493	493	494	496	500	498	494	488	479	476	471	465	471	453	462	494	493	493	493	493	490	490	489	486	660
Mean	486	483	481	483	485	485	486	486	485	481	477	472	*471*	476	483	489	496	500	*501*	499	497	495	491	489	487	
Sum 14,000γ+	1067	956	913	964	1032	1037	1055	1058	1018	901	782	644	615	759	964	1175	1383	1488	1541	1478	1411	1348	1218	1154		Grand Total 361,961

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — JULY 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1 *d*	3233 3442	24	3233 3442	24	2222 2322	17	0000 2122	7	1	13
2	3310 1011	10	3210 1011	9	3310 0000	7	3101 0000	5	1	13
3 *q*	1100 0122	7	1100 0122	7	1100 0012	5	0000 0000	0	0	13
4	1111 1323	13	1101 1322	11	1110 0113	8	0001 0110	3	1	13
5 *d*	3334 3322	23	3234 3322	22	3322 3112	17	2011 3111	10	1	13
6	1001 3323	13	0001 3323	12	1001 2223	11	0000 2112	6	1	14
7	4312 3221	18	4312 3221	18	3311 1011	11	3220 0100	8	1	14
8	2112 1210	10	2012 1210	9	1100 0000	2	1000 0000	1	0	14
9 *q*	0010 1121	6	0010 1121	6	0010 0000	1	0000 0100	1	0	14
10 *q*	0011 1111	6	0001 1111	5	0010 0001	2	0000 0000	0	0	14
11 *d*	4333 4442	27	4333 4442	27	3322 2332	20	3221 2212	15	1	14
12	2332 2322	19	2222 2322	17	2331 0001	10	0100 0001	2	1	14
13	2111 1233	14	2101 1222	11	1110 0033	9	1110 0001	4	1	14
14	2222 3222	17	2222 3222	17	1211 1101	8	0000 0000	0	1	14
15	0011 3432	14	0011 3432	14	0010 1232	9	0010 0111	4	1	14
16	1212 1011	9	1212 1011	9	0100 0001	2	0000 0000	0	0	14
17	1111 2232	13	1011 2232	12	0111 0011	5	0000 0000	0	1	14
18	2222 3221	16	2222 3221	16	1222 2101	11	0000 0000	0	1	14
19	3000 2221	10	2000 2221	9	3000 0000	3	0000 0000	0	0	14
20	2122 2212	14	2022 2211	12	1101 1012	7	0000 0100	1	1	14
21	1111 2221	11	1111 2221	11	0110 0000	2	0000 0000	0	0	14
22 *q*	0001 2210	6	0001 2210	6	0000 0000	0	0000 0000	0	0	14
23 *d*	0102 3344	17	0001 3344	15	0102 1234	13	0001 1022	6	1	14
24	3322 2232	19	2212 2232	16	3321 0030	12	0000 1010	2	1	14
25	1113 3442	19	1012 2332	14	1113 3442	19	0000 0020	2	1	14
26	3212 2310	14	2212 2310	13	3111 1100	8	0000 0000	0	1	14
27	0010 1121	6	0010 1121	6	0010 0001	2	0000 0000	0	0	14
28	3212 4542	23	3212 4542	23	2011 1231	11	1000 0010	2	1	14
29	3331 1333	20	2331 1333	19	3321 0213	15	0100 0100	2	1	14
30 *d*	4541 2120	19	3541 2120	18	4431 0000	12	3331 1000	11	1	14
31 *q*	0001 1000	2	0000 0000	0	0001 1000	2	0000 0000	0	0	14
								Mean	0·68	14

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — AUGUST 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 22,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *q*	954	955	955	959	962	963	960	953	943	936	934	938	948	955	962	965	966	978	977	976	974	973	971	972	960	1029
2 *q*	972	970	968	966	967	965	963	956	944	936	932	934	939	953	968	975	974	968	970	969	969	969	967	966	961	1060
3 *q*	966	963	964	967	969	967	959	951	947	936	928	928	943	964	972	977	981	985	974	975	975	970	974	969	963	1104
4	964	969	970	968	967	962	954	953	950	953	955	954	957	958	939	992	967	975	1000	992	978	975	974	971	967	1197
5	982	985	967	968	970	967	963	960	961	956	954	946	957	955	961	957	978	991	984	981	980	976	971	972	*968*	1242
6	971	971	967	972	974	972	974	972	963	947	939	944	946	949	962	969	974	979	999	986	985	977	976	974	*968*	1242
7	975	976	966	966	971	971	965	951	933	932	931	925	944	948	952	959	966	971	995	1000	984	972	973	988	963	1114
8	972	968	983	983	975	977	958	954	942	936	931	928	934	942	947	960	971	973	986	983	976	978	980	980	963	1117
9	967	963	965	969	968	968	958	942	929	913	910	919	932	948	962	972	965	982	985	986	981	984	982	979	960	1029
10 *d*	982	978	974	967	959	965	963	958	938	929	929	919	920	923	938	968	959	975	980	979	989	989	970	957	959	1008
11 *d*	966	965	964	971	970	969	971	951	938	935	942	943	950	962	982	970	971	982	1009	997	978	967	955	963	965	1171
12	961	950	955	958	959	954	950	941	927	927	927	931	939	956	957	967	982	987	979	982	985	974	968	966	958	982
13	961	965	959	958	961	959	951	942	931	926	929	930	933	948	967	978	991	989	964	978	975	971	974	968	959	1008
14	976	968	965	963	960	958	954	931	936	933	930	946	949	952	956	964	975	977	974	977	980	972	975	971	960	1042
15	967	966	966	968	965	964	955	950	948	942	944	950	947	968	969	984	980	979	986	982	978	978	975	990	967	1198
16	970	963	962	964	965	962	955	950	950	945	942	938	950	959	958	990	991	986	980	979	985	988	990	974	967	1196
17 *d*	962	968	964	963	968	973	958	950	949	947	938	961	933	969	972	973	982	992	980	983	987	974	970	971	966	1187
18 *d*	990	955	950	957	962	962	956	944	946	947	947	943	952	979	970	971	976	973	983	976	981	974	957	957	963	1108
19	966	965	958	957	958	945	939	943	938	924	923	924	934	948	959	971	962	973	975	986	982	975	971	972	*956*	948
20	979	973	970	961	956	963	957	959	945	941	940	950	965	957	976	1003	984	974	976	976	979	978	967	967	967	1196
21	963	963	971	964	964	965	964	955	942	933	927	932	940	957	977	974	972	967	974	978	975	972	972	975	961	1076
22 *q*	973	967	971	969	970	963	955	946	933	924	925	930	935	945	955	965	977	976	975	979	978	975	980	976	960	1042
23 *q*	970	971	966	969	967	962	953	941	929	924	918	916	933	948	966	975	979	986	994	975	979	976	970	966	960	1033
24	981	983	973	964	962	962	955	939	921	916	914	926	951	952	977	973	986	990	982	979	986	992	986	980	964	1130
25 *d*	978	981	979	971	967	964	960	946	948	938	925	927	931	940	962	973	958	979	977	987	965	972	975	992	962	1095
26	951	955	964	961	957	956	947	936	933	930	926	937	948	943	949	956	972	969	981	994	975	973	981	963	957	957
27	965	962	969	963	957	957	952	945	937	923	925	935	944	959	964	954	957	965	971	970	973	976	984	969	957	976
28	967	964	966	963	961	962	950	945	938	937	938	946	959	958	962	969	972	965	963	966	972	970	973	970	960	1036
29	981	971	968	966	964	964	959	957	953	951	952	956	960	948	946	951	957	967	976	979	983	984	969	963	964	1125
30	968	967	969	967	958	966	975	960	954	949	932	932	933	934	937	954	968	975	976	982	992	981	971	962	961	1062
31	973	973	960	968	971	963	957	946	920	932	936	946	951	942	944	949	960	973	974	979	973	975	982	981	959	1028
Mean	970	967	966	965	965	963	958	949	941	935	*933*	937	944	952	960	970	973	977	981	*981*	979	976	974	972	962	
Sum 28,000γ+	2073	1993	1948	1927	1904	1870	1690	1427	1166	998	923	1034	1257	1519	1768	2058	2153	2301	2399	2411	2352	2260	2183	2124		Grand Total 715,738

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — AUGUST 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1200·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *q*	51·3	51·0	50·9	50·7	49·2	47·4	46·4	46·3	46·3	47·4	50·8	55·0	57·9	59·5	58·5	56·7	54·2	52·6	52·9	53·1	53·0	53·1	53·0	52·9	52·1	50·1
2 *q*	52·6	51·9	51·0	50·1	49·0	47·0	45·7	45·4	46·2	48·2	50·7	53·8	56·2	57·8	56·8	53·7	51·2	49·8	50·2	51·3	52·0	53·0	52·2	52·2	51·2	28·0
3 *q*	51·8	51·2	51·0	50·2	48·7	46·5	45·7	45·9	46·6	49·4	53·8	55·9	57·8	58·3	55·8	53·4	52·9	51·9	52·2	53·1	53·3	53·0	53·4	51·7	51·8	43·5
4	51·2	50·7	50·5	49·7	48·0	46·5	45·2	47·0	48·0	50·2	51·9	55·2	58·3	59·5	57·2	56·3	53·4	52·8	53·1	52·2	51·1	51·5	51·1	52·4	51·8	43·0
5	53·4	46·9	48·9	49·6	49·5	48·0	48·8	49·9	50·7	52·3	53·8	56·7	60·9	62·2	60·9	58·1	55·1	53·0	52·4	52·6	52·4	52·3	51·9	51·5	*53·0*	71·8
6	51·0	50·9	49·8	50·4	48·3	47·7	45·8	45·8	46·0	46·8	49·1	52·1	55·2	57·7	58·2	56·3	54·2	51·8	51·1	50·1	50·9	52·0	52·6	52·1	51·1	25·9
7	49·5	50·1	48·3	47·5	47·5	46·3	46·1	45·8	48·2	49·2	51·8	55·4	57·2	59·2	59·0	57·3	55·3	52·8	52·1	52·2	48·9	49·2	51·2	48·0	51·2	28·1
8	46·5	51·3	53·2	49·4	48·3	47·9	48·6	50·5	50·9	51·6	51·4	54·0	57·7	60·3	60·5	58·8	57·1	53·7	51·8	51·8	51·9	52·0	52·2	49·4	52·5	60·8
9	50·6	50·5	50·1	50·1	49·1	47·8	46·2	45·7	46·5	49·0	53·1	56·3	59·7	61·8	61·8	60·1	56·1	53·4	52·1	51·9	51·8	52·1	50·4	50·4	52·4	56·6
10 *d*	49·9	51·8	51·7	49·4	46·5	48·7	44·9	42·4	43·5	45·5	49·1	54·0	59·4	60·7	62·2	59·0	55·8	53·5	51·6	51·7	51·9	50·2	43·0	46·4	50·9	22·8
11 *d*	49·8	49·3	52·3	51·0	47·7	45·7	40·5	42·8	44·5	50·1	52·7	57·3	60·2	62·3	64·1	61·9	57·6	54·3	52·6	43·4	45·4	43·7	42·1	48·1	50·8	19·4
12	45·4	49·1	52·8	50·2	48·9	46·1	46·4	46·9	48·5	51·0	53·9	56·7	58·8	60·5	59·3	57·0	54·4	52·8	52·4	52·5	52·3	51·9	51·4	51·2	52·1	50·4
13	51·7	51·4	50·7	49·1	48·0	46·5	45·1	45·1	46·6	49·0	52·0	55·7	58·3	59·0	59·1	57·1	54·0	53·6	52·7	53·7	52·4	50·0	51·1	52·0	51·8	43·9
14	50·3	50·7	51·5	51·1	47·8	51·1	47·5	47·4	49·3	50·6	53·8	55·6	57·5	58·1	61·7	55·0	53·2	52·1	51·8	52·8	50·2	51·8	52·7	52·0	52·3	55·6
15	51·0	50·0	49·4	50·1	47·1	46·7	47·0	48·3	49·1	51·1	53·6	56·9	56·3	58·2	56·8	55·9	54·9	53·9	54·4	53·5	52·9	51·2	51·1	48·6	52·0	48·0
16	50·2	47·7	48·7	47·5	47·7	47·6	46·6	45·5	46·8	48·5	52·1	55·2	58·6	60·7	59·1	59·0	57·9	55·8	55·0	54·7	53·0	53·5	48·4	44·4	51·8	44·2
17 *d*	45·8	49·0	48·2	47·8	50·0	47·1	47·2	47·6	46·6	48·3	53·5	57·7	60·2	60·3	60·8	58·3	53·4	53·7	55·8	54·1	53·5	53·4	52·9	52·4	52·4	57·6
18 *d*	48·8	42·6	42·9	44·9	45·8	45·5	44·5	46·3	47·4	47·7	49·8	52·2	53·3	58·5	59·4	58·0	57·3	55·4	54·7	52·7	51·3	51·2	49·5	50·5	*50·4*	10·2
19	50·8	51·3	47·8	47·9	47·3	44·9	45·6	45·0	45·7	48·5	42·1	55·8	58·7	60·8	61·2	59·7	57·0	55·5	54·1	53·3	49·6	51·3	51·1	51·5	51·9	46·5
20	51·6	50·1	48·4	48·4	50·8	51·6	48·0	48·4	47·0	48·7	53·1	57·7	62·8	62·6	62·2	60·6	56·8	52·0	51·4	52·5	51·7	47·5	48·9	50·8	52·7	63·6
21	50·5	51·7	51·8	50·1	50·4	49·3	46·6	45·3	45·0	47·2	50·5	56·4	61·2	62·3	60·6	57·4	54·6	51·9	51·0	51·7	51·9	51·9	52·3	51·8	52·2	53·4
22 *q*	51·8	51·0	51·1	50·5	49·9	47·6	46·6	45·9	46·4	49·4	53·0	58·2	61·5	61·1	59·5	56·8	54·3	51·2	50·6	52·1	52·4	51·9	52·1	51·4	52·3	56·3
23 *q*	51·3	51·4	50·6	51·3	48·5	46·3	45·3	44·2	45·3	49·1	54·1	58·0	60·5	61·2	59·0	55·9	53·2	51·7	51·8	50·3	53·1	53·1	52·5	51·9	52·1	49·6
24	51·2	50·0	46·8	46·9	47·1	46·2	44·8	44·1	45·3	48·5	53·1	56·9	60·3	61·2	61·7	59·9	58·3	56·8	55·1	53·9	53·6	53·2	52·2	50·5	52·4	57·6
25 *d*	50·8	50·5	50·1	49·9	48·9	44·9	44·4	44·3	46·6	49·1	51·7	56·9	62·5	63·7	64·7	62·9	56·8	55·7	52·6	52·8	50·0	52·4	52·2	48·9	52·6	63·3
26	45·9	50·0	50·0	49·2	48·7	47·2	45·3	45·0	47·7	50·1	52·7	56·8	59·2	59·4	58·4	57·4	56·4	54·5	53·8	50·0	49·9	52·4	48·2	49·3	51·6	37·5
27	50·5	50·3	50·6	51·4	47·9	45·3	45·3	45·2	46·6	50·2	52·4	54·4	56·8	58·7	58·8	57·1	55·1	53·7	52·8	52·4	52·1	52·3	49·6	48·5	51·6	38·0
28	50·8	50·5	50·3	49·5	49·0	48·0	47·1	46·9	48·0	50·3	54·1	57·6	59·8	59·7	58·0	56·5	55·1	52·7	53·2	53·2	52·6	52·3	52·7	51·2	52·5	59·1
29	51·8	50·9	50·3	49·7	49·0	48·0	46·5	47·3	49·2	51·1	53·8	55·9	59·4	58·8	56·4	54·7	52·6	51·5	52·2	52·8	52·9	52·6	51·9	50·5	52·1	49·8
30	51·1	50·9	50·2	48·6	49·2	49·5	47·8	48·7	49·2	49·4	51·9	55·1	58·3	60·1	57·8	55·9	53·6	51·4	50·6	46·4	48·4	46·3	43·7	46·6	50·9	20·7
31	47·7	47·8	50·7	51·6	48·6	47·2	47·7	49·2	51·6	53·9	54·3	56·6	59·3	60·5	58·9	56·8	54·5	52·0	50·7	51·4	52·2	52·4	47·9	45·7	52·1	49·2
Mean	50·2	50·1	50·0	49·5	48·5	47·3	*46·1*	46·3	47·3	49·4	52·4	55·9	58·8	*60·1*	59·6	57·5	55·0	53·1	52·5	51·9	51·6	51·4	50·5	50·1	51·9	
Sum 1400·0′+	156·6	152·5	150·6	133·8	102·4	66·1	29·2	34·1	65·3	131·4	223·7	332·0	423·8	464·7	448·4	383·5	306·3	247·5	228·8	210·2	198·6	194·7	165·5	154·8		Grand Total 38604·5

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — AUGUST 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *q*	492	491	491	491	493	494	493	493	488	482	473	459	456	465	481	488	490	497	498	492	492	490	489	487	486	665
2 *q*	490	489	489	492	494	495	494	494	494	488	481	476	473	477	484	490	494	498	491	488	487	487	487	488	488	720
3 *q*	490	489	489	489	492	494	493	492	486	479	476	467	462	470	480	486	490	494	494	490	488	487	486	488	485	651
4	490	489	489	489	492	493	491	490	485	479	473	469	474	484	492	502	512	504	501	504	501	497	492	492	*491*	784
5	483	474	479	484	488	490	490	487	483	477	471	487	470	480	487	494	496	498	497	494	493	491	491	491	486	675
6	491	490	490	490	491	492	488	483	481	483	481	476	467	469	479	490	495	499	498	498	497	492	489	488	487	697
7	484	477	480	484	488	489	489	489	484	478	476	469	467	477	491	497	503	502	498	495	497	495	490	482	487	681
8	482	480	467	470	479	479	481	481	487	485	474	470	470	477	485	493	502	513	512	502	493	491	486	480	485	639
9	481	484	487	487	490	494	495	497	492	483	473	469	467	467	474	483	487	490	490	488	487	484	484	483	484	616
10 *d*	479	473	467	469	477	479	486	492	493	486	479	477	479	480	486	494	495	496	492	489	488	486	483	481	484	606
11 *d*	483	482	481	474	483	488	483	479	474	470	462	456	452	456	472	487	501	506	507	517	505	491	486	474	482	569
12	466	467	471	480	488	491	491	490	488	482	473	467	467	477	488	497	501	501	497	495	491	484	488	486	484	626
13	485	483	483	485	490	491	492	493	491	483	478	474	472	474	483	493	504	506	501	492	492	493	487	485	488	710
14	473	472	466	467	475	476	474	478	474	474	470	467	470	474	485	488	491	495	496	495	495	492	488	487	480	522
15	482	483	484	484	485	484	484	483	480	474	469	467	467	468	477	483	488	490	491	491	490	490	489	484	482	567
16	481	482	482	484	485	486	486	485	484	475	466	461	464	472	481	492	498	502	499	495	493	489	491	485	484	618
17 *d*	480	475	477	468	464	466	467	467	469	471	469	467	469	473	489	502	506	508	500	492	492	491	491	491	481	544
18 *d*	478	478	483	485	487	486	484	482	475	475	469	466	469	480	492	497	505	507	502	499	498	495	495	492	487	679
19	487	480	481	485	486	488	484	483	476	467	456	446	452	461	475	484	491	492	491	489	493	492	489	488	*480*	516
20	483	481	482	484	485	478	480	479	480	477	472	470	473	481	490	498	506	507	504	493	490	492	490	486	486	661
21	486	486	482	484	486	488	489	487	480	474	468	463	467	475	480	494	500	499	494	489	488	487	486	485	484	617
22 *q*	484	484	485	486	489	491	492	494	489	482	471	462	463	471	482	491	495	498	495	490	486	488	485	484	485	637
23 *q*	485	485	488	485	486	491	492	494	488	473	463	461	460	467	477	486	490	491	493	498	492	491	490	489	484	615
24	487	479	475	481	481	486	489	490	487	478	467	460	460	464	497	478	485	492	495	494	488	485	485	488	482	571
25 *d*	488	485	484	487	488	489	485	479	477	473	469	463	463	471	482	499	510	505	503	498	504	496	491	480	486	669
26	473	481	485	488	493	494	495	492	486	475	468	460	461	469	479	485	491	496	496	495	496	491	485	483	484	617
27	483	485	485	481	484	485	485	483	479	477	470	466	465	470	481	491	491	494	494	491	490	489	482	483	483	584
28	485	486	485	488	489	488	488	486	480	468	460	463	467	472	481	488	496	500	494	489	489	489	487	487	484	605
29	481	483	485	487	489	489	488	485	476	468	462	463	463	476	488	495	493	491	486	485	485	485	489	489	483	581
30	489	488	488	489	489	482	480	480	477	477	478	478	478	484	490	494	497	498	499	500	490	486	482	477	486	670
31	473	474	478	478	478	484	484	484	485	479	480	477	474	481	483	496	494	496	496	495	492	491	486	480	484	618
Mean	483	482	482	483	486	487	487	486	483	477	471	467	*467*	473	484	491	497	*499*	497	494	492	490	488	485	485	
Sum 14,000γ+	974	935	938	975	1064	1100	1092	1071	968	792	597	476	461	662	991	1235	1397	1465	1404	1322	1262	1187	1119	1043		Grand Total 360,530

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — AUGUST 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1 *q*	0002 2220	8	0002 2220	8	0000 0100	1	0000 0100	1	0	14
2 *q*	1002 0111	6	1002 0111	6	0000 0011	2	0000 0000	0	0	14
3 *q*	0001 2212	8	0001 2212	8	0000 0012	3	0000 0000	0	0	14
4	1021 3332	15	1021 3331	14	0021 2222	11	0010 0100	2	1	14
5	3212 2321	16	3112 2321	15	3211 1001	9	1000 0000	1	1	14
6	1211 1132	12	1101 1132	10	0211 0012	7	0000 0000	0	1	14
7	3112 2233	17	2011 2233	14	3112 0123	13	1000 0002	3	1	14
8	4222 3323	21	2222 3323	19	4221 1212	15	2100 0111	6	1	14
9	2111 3411	14	2101 3411	13	0010 1201	5	0000 0000	0	1	14
10 *d*	2223 3323	20	2213 3323	19	2221 2213	15	1110 0011	5	1	14
11 *d*	3333 4543	28	2223 4543	25	3332 2343	23	0110 0123	8	1	14
12	3221 2223	17	3021 2223	15	3221 0011	10	1100 0010	3	1	14
13	1101 3333	15	1101 3333	15	1000 0213	7	0000 0111	3	1	14
14	3332 2132	19	2232 2122	16	3321 1032	15	1100 1133	10	1	14
15	2213 3222	17	0113 3222	14	2212 2112	13	0000 0001	1	1	14
16	2112 2323	16	2012 2323	15	2111 1223	13	0000 0111	3	1	14
17 *d*	3234 4422	24	2224 4422	22	3232 2322	19	1101 1110	6	1	14
18 *d*	4222 3332	21	4222 3332	21	4221 2122	16	1010 1010	4	1	14
19	2222 3232	18	2222 3232	18	2120 1121	10	1000 0000	1	1	14
20	2222 3312	17	2222 3312	17	2221 2212	14	0100 0000	1	1	14
21	2122 3221	15	2112 3221	14	2121 1011	9	0000 0000	0	1	14
22 *q*	1112 2221	12	1002 2211	9	1110 0111	6	0000 0000	0	0	14
23 *q*	1101 1231	10	1101 1231	10	1100 0021	5	0000 0010	1	0	14
24	2112 2322	15	1012 2322	13	2110 1102	8	2000 0000	2	1	14
25 *d*	2223 3334	22	2223 3333	21	1222 2224	17	0000 0112	4	1	14
26	3012 2333	17	3012 2333	17	3011 1133	13	1000 0011	3	1	14
27	2222 2213	16	2112 2213	14	1221 1103	11	0000 0001	1	1	14
28	1211 2321	13	1211 2321	13	1111 1101	7	0000 0010	1	1	14
29	3022 2323	17	3012 2323	16	2021 1112	10	0000 0000	0	1	14
30	1332 2333	20	1332 2333	20	0221 1133	13	0000 0011	2	1	14
31	3222 3323	20	3222 3322	19	3211 1013	12	0000 0002	2	1	15
								Mean	0·84	14

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 21,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	967	967	968	971	974	964	950	944	948	930	932	939	948	956	956	966	974	995	964	973	960	965	972	986	961	2069
2	978	957	951	959	961	955	941	922	928	913	911	926	953	967	972	978	952	964	956	960	969	961	964	961	952	1859
3	961	960	956	957	959	959	953	946	930	917	911	932	944	952	964	966	973	972	969	969	972	973	977	966	956	1938
4	961	959	963	964	960	960	958	938	932	924	923	928	937	940	952	961	958	959	967	967	969	968	967	967	953	1882
5 *q*	968	963	959	961	963	958	952	940	930	930	940	944	952	957	957	960	967	966	966	973	972	967	965	968	957	1978
6	969	971	966	968	971	968	957	948	934	926	930	937	951	959	964	971	969	970	974	974	975	966	965	969	961	2052
7	969	970	967	967	966	967	961	953	942	936	938	942	951	966	990	984	976	978	976	979	974	971	970	963	*965*	2156
8	970	971	967	965	964	963	957	950	942	933	929	930	944	942	953	965	968	953	976	984	967	957	962	967	957	1979
9	976	965	960	972	962	960	960	949	937	928	913	908	929	929	950	955	957	962	974	973	965	960	956	950	952	1850
10 *q*	953	953	958	963	963	963	961	959	951	944	932	928	929	937	952	957	965	965	969	974	975	974	972	972	957	1969
11 *q*	972	970	969	969	970	969	967	960	952	944	934	935	942	955	962	967	970	973	969	971	974	974	972	972	963	2112
12 *q*	971	972	971	969	967	968	967	963	957	947	940	939	944	951	949	956	967	972	978	984	980	971	974	974	964	2131
13	977	974	972	969	974	988	999	978	941	937	939	917	930	944	946	959	953	928	957	961	949	942	946	940	955	1920
14	954	956	951	950	953	949	938	938	932	917	921	926	923	925	936	949	962	957	967	968	985	975	956	971	948	1759
15	956	961	954	956	974	957	930	942	935	932	930	925	930	938	945	953	959	968	969	973	980	964	962	966	952	1859
16	971	944	954	959	953	957	962	959	952	942	935	940	940	945	944	946	956	968	967	969	970	973	980	974	957	1960
17	967	967	962	965	961	961	956	955	948	942	936	935	935	933	944	953	952	955	965	972	971	973	972	968	956	1948
18	974	971	972	972	971	971	966	960	952	939	933	926	928	941	957	954	966	973	972	982	958	940	940	941	957	1959
19	942	956	966	957	961	964	951	955	938	934	931	937	945	934	953	962	964	971	970	970	981	969	967	965	956	1943
20 *d*	960	977	967	963	974	962	966	937	924	931	905	901	897	905	943	943	951	977	963	983	986	968	960	955	950	1798
21 *d*	965	943	888	904	932	872	883	891	862	870	869	888	901	899	939	956	991	950	955	949	917	912	938	916	*916*	990
22	947	939	938	935	931	941	935	929	924	918	913	918	923	933	940	956	944	957	944	947	950	952	953	952	938	1519
23 *q*	953	951	951	950	950	951	951	945	933	926	923	925	927	923	937	947	954	957	959	961	962	961	961	959	947	1717
24	960	962	963	959	960	960	958	952	941	924	919	919	919	927	931	939	935	960	958	965	976	989	957	960	950	1793
25	964	964	960	961	960	963	963	959	952	942	934	935	937	940	947	951	952	958	967	967	959	960	974	956	955	1925
26	960	961	960	961	960	962	962	954	941	932	923	926	933	944	951	959	960	967	974	973	971	959	965	961	955	1919
27	951	957	956	960	961	962	958	955	947	936	929	930	937	941	939	949	959	958	967	970	970	973	976	977	955	1918
28 *d*	977	976	982	987	980	971	959	955	949	926	890	865	897	927	927	934	939	959	941	932	951	927	933	924	942	1608
29 *d*	929	927	952	923	946	923	881	885	900	893	908	900	899	901	901	930	939	947	932	917	908	928	942	940	919	1051
30 *d*	912	926	945	961	946	958	921	945	939	907	888	896	902	925	922	947	964	949	945	952	954	956	959	978	937	1497
Mean	961	960	958	959	961	957	951	945	936	927	*922*	923	931	938	947	956	960	963	964	*966*	965	961	962	961	951	
Sum 27,000γ+	1834	1790	1748	1777	1827	1726	1523	1366	1093	820	659	697	927	1136	1423	1673	1796	1888	1910	1992	1950	1828	1857	1818		Grand Total 685,058

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	47·7	51·9	55·1	51·7	49·4	46·8	51·0	52·5	50·6	50·0	51·4	54·8	57·5	58·6	53·8	53·7	52·5	52·2	51·9	46·2	47·8	50·2	50·5	46·8	51·4	134·6
2	47·3	47·2	47·7	51·9	47·7	46·9	46·3	45·0	48·6	51·9	54·0	56·8	56·5	57·6	56·0	55·5	49·3	48·7	50·7	52·1	51·6	51·3	51·7	51·3	51·0	123·6
3	52·6	51·8	51·6	50·5	49·8	49·0	47·5	47·3	47·6	50·3	51·3	57·2	59·1	57·7	55·3	52·3	49·6	48·5	52·3	53·4	53·1	52·7	50·3	52·8	51·8	143·6
4	52·4	52·2	52·5	52·1	52·1	48·7	47·7	46·3	47·4	49·0	52·4	56·0	58·7	57·4	55·5	52·9	50·8	49·6	49·3	51·4	52·3	52·4	51·7	51·6	51·8	142·4
5 *q*	51·7	50·7	50·6	50·2	49·0	48·2	47·5	47·8	49·3	51·9	54·4	57·0	58·3	57·5	55·5	53·7	51·9	50·7	49·9	51·2	52·2	51·9	51·5	51·3	51·8	143·9
6	51·1	51·3	52·4	52·4	49·4	48·0	46·9	46·8	47·7	50·5	53·9	58·2	60·6	61·1	59·2	56·4	53·7	52·7	51·7	50·8	51·0	51·3	50·8	50·8	52·4	158·7
7	50·3	50·5	50·4	50·0	49·2	48·2	47·1	46·6	47·7	49·7	52·9	56·4	58·8	59·7	61·8	60·7	57·4	56·4	54·3	54·8	54·2	53·9	52·1	51·4	*53·1*	174·5
8	50·4	50·1	48·6	48·8	49·0	48·1	46·7	46·7	47·1	48·3	52·0	56·0	60·4	62·3	59·4	59·6	57·8	55·1	52·9	45·3	46·1	47·9	49·6	49·2	51·6	137·4
9	48·9	48·4	48·1	51·6	46·9	46·7	46·6	46·6	47·3	50·0	54·6	57·2	61·4	59·9	58·5	56·3	53·9	52·2	51·2	51·9	49·0	46·6	46·9	46·7	51·1	127·4
10 *q*	44·1	46·0	47·7	46·7	47·7	48·4	47·7	47·3	47·9	49·2	51·2	54·6	57·5	59·4	59·7	57·9	55·9	54·0	53·2	53·0	52·6	51·9	51·6	51·3	51·5	136·5
11 *q*	50·7	50·6	50·5	50·4	50·0	49·2	48·0	47·2	46·6	47·6	49·6	53·2	57·3	59·6	58·7	56·7	54·8	53·8	53·2	52·9	52·1	51·9	51·6	51·6	52·0	147·8
12 *q*	51·4	51·2	50·7	50·1	49·7	49·1	47·8	46·7	46·6	47·8	50·1	53·1	55·5	57·5	56·5	55·2	53·6	52·5	52·4	52·3	52·8	52·1	52·1	51·7	51·6	138·5
13	51·3	50·4	50·2	49·5	48·2	44·7	44·2	44·3	44·3	50·4	56·2	54·9	56·9	58·7	59·7	61·2	57·0	51·3	49·3	48·1	50·4	48·4	50·1	50·9	51·3	130·6
14	51·9	49·6	50·1	49·7	49·9	48·6	48·0	47·7	49·2	50·9	53·9	58·4	61·7	62·2	61·9	56·1	54·6	52·0	51·0	52·2	47·7	47·6	49·9	52·1	52·4	156·9
15	52·7	48·6	50·3	51·2	47·7	47·8	49·5	50·1	47·1	47·7	51·4	54·6	56·6	57·4	57·1	56·3	54·8	53·5	52·9	52·5	49·8	50·9	51·8	51·0	51·8	143·3
16	44·8	46·2	47·7	45·6	47·7	49·0	47·7	48·0	48·2	49·5	51·6	55·6	57·6	58·3	57·6	55·7	51·1	50·9	51·0	51·9	52·1	51·7	49·1	50·0	50·8	118·6
17	50·3	50·6	49·5	51·4	49·6	49·1	48·0	48·3	48·2	49·9	51·6	54·7	56·8	56·5	56·4	56·0	54·7	53·3	54·0	53·6	52·5	51·9	51·6	51·4	52·1	149·9
18	51·4	51·2	51·0	50·5	50·4	50·1	49·2	47·4	46·6	47·8	51·0	55·2	58·5	58·9	59·9	58·0	56·2	54·6	53·4	46·6	45·4	45·4	44·3	41·5	51·0	124·5
19	42·6	49·4	48·4	48·1	47·7	46·7	49·4	46·3	47·6	50·7	53·6	57·9	61·2	60·3	59·3	56·6	55·0	53·7	52·3	52·9	48·7	50·6	51·0	49·9	51·7	139·9
20 *d*	48·9	47·4	47·3	45·4	51·9	48·4	47·9	45·6	46·4	50·8	54·3	57·9	57·7	58·5	52·9	56·9	59·6	57·3	57·1	55·7	51·2	42·5	46·5	53·3	51·7	141·4
21 *d*	51·4	43·5	40·3	29·3	40·9	43·8	49·3	56·6	55·5	50·5	57·2	58·2	59·7	61·3	57·9	56·4	45·5	50·7	51·9	43·4	46·7	47·2	43·9	44·8	49·4	85·9
22	49·3	49·6	48·5	47·1	49·2	49·1	49·2	48·1	48·0	49·6	51·2	53·5	56·1	56·2	55·4	53·2	51·9	50·5	51·5	52·5	52·0	51·3	50·8	50·6	51·0	124·4
23 *q*	50·6	50·5	50·3	50·2	49·9	49·8	48·6	47·1	47·3	49·0	51·0	54·3	57·3	55·9	55·7	54·6	52·8	51·9	51·9	51·5	51·2	51·0	51·1	50·9	51·4	134·4
24	50·8	50·6	50·4	49·9	50·0	49·5	48·6	47·1	45·7	47·7	51·0	54·4	56·4	58·9	59·3	58·6	52·9	52·1	52·2	51·4	50·1	46·7	46·1	48·6	51·2	129·0
25	49·6	50·5	50·4	50·2	49·8	49·3	49·1	48·5	47·5	47·7	49·4	52·9	56·1	57·4	57·6	57·3	56·2	55·0	53·8	50·9	50·9	51·3	49·8	46·1	51·6	137·3
26	50·3	50·6	50·0	49·7	49·4	49·1	47·9	46·7	46·5	47·6	49·9	53·2	55·9	57·2	56·7	55·1	53·8	53·1	52·9	51·7	49·0	51·8	49·3	45·6	51·0	123·0
27	47·4	49·0	50·1	49·1	49·5	49·7	49·0	47·8	47·1	47·5	49·9	53·7	58·3	59·2	58·0	55·8	53·6	51·4	52·3	52·0	51·9	51·4	51·9	51·7	51·6	137·3
28 *d*	51·2	50·1	49·2	47·6	46·2	51·2	47·7	51·2	46·4	48·3	51·9	55·7	58·6	61·6	60·7	59·3	55·3	51·2	49·1	46·6	41·1	43·8	38·2	42·5	50·2	104·7
29 *d*	42·1	34·7	39·6	48·0	50·1	51·3	50·8	55·0	50·9	47·6	50·8	51·9	53·8	55·0	52·2	50·0	51·5	48·0	43·6	44·4	43·5	40·2	50·9	46·3	*48·0*	52·2
30 *d*	40·8	51·4	45·8	44·2	45·3	46·6	49·0	47·3	49·0	48·2	51·4	56·2	56·3	56·3	57·4	55·6	43·0	49·2	50·6	51·1	51·3	51·9	52·0	50·7	50·0	100·6
Mean	49·2	49·2	49·2	48·8	48·8	48·4	48·1	48·0	*47·9*	49·3	52·2	55·5	57·9	*58·6*	57·5	56·1	53·4	52·2	51·8	50·8	50·0	49·7	49·6	49·5	51·3	
Sum 1400·0′+	76·0	75·8	75·0	63·1	63·3	51·1	43·9	39·9	35·9	77·6	165·1	263·7	337·1	358·1	325·6	283·6	200·7	166·1	153·8	124·3	100·3	89·7	88·7	84·4		Grand Total 36942·8

GEOMAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	477	478	473	467	468	471	471	473	477	480	475	471	476	487	512	503	499	498	507	506	502	489	482	466	484	608
2	447	465	474	475	480	486	489	491	485	482	481	477	479	481	486	506	516	518	508	500	494	494	490	491	487	695
3	492	492	492	492	493	493	493	493	494	488	482	480	485	490	500	504	505	506	498	491	490	489	488	484	492	814
4	489	490	490	489	487	489	490	492	491	488	481	480	482	489	492	495	498	498	497	493	491	490	490	489	490	760
5 *q*	489	487	488	489	490	491	493	492	489	486	481	474	474	479	485	490	490	490	490	487	485	486	488	488	487	681
6	489	487	486	481	478	481	485	486	484	480	474	468	467	471	478	486	490	489	489	491	490	490	490	489	483	599
7	489	488	488	489	489	489	489	486	483	481	474	467	467	468	474	486	492	507	502	495	493	492	490	491	486	669
8	491	490	490	491	490	491	491	491	487	482	477	473	474	480	484	492	506	509	506	507	497	493	491	487	490	770
9	482	481	484	467	473	482	484	484	482	478	477	479	482	484	484	488	491	492	493	495	500	497	493	491	485	643
10 *q*	486	485	485	484	487	489	490	490	488	485	479	472	466	464	470	479	484	488	488	486	486	487	487	487	483	592
11 *q*	488	488	487	486	485	488	489	486	483	477	474	468	466	467	474	481	488	490	490	490	489	489	487	486	483	596
12 *q*	487	486	485	486	487	488	488	485	482	478	476	473	470	470	472	478	481	482	482	484	485	486	485	485	482	561
13	487	485	485	486	482	474	467	468	469	470	464	475	473	478	488	508	548	556	540	529	520	510	499	480	493	841
14	478	485	489	490	491	491	494	494	487	485	481	475	479	490	495	501	499	503	501	497	491	476	485	481	489	738
15	468	469	473	476	479	483	486	484	489	484	478	477	478	481	483	486	489	490	490	492	492	489	491	490	483	597
16	485	481	469	471	483	485	485	486	490	491	486	477	475	481	485	492	500	499	495	492	491	490	486	486	486	661
17	490	489	491	488	487	487	488	487	484	477	474	467	465	469	477	484	493	497	495	497	491	490	488	489	485	644
18	490	490	488	488	487	487	486	484	484	481	474	467	462	464	472	483	487	493	501	497	496	495	491	485	485	632
19	475	462	465	479	485	486	485	485	486	480	475	471	476	488	493	491	495	495	500	500	502	507	500	495	487	676
20 *d*	496	487	487	482	474	479	482	485	482	478	477	479	490	494	519	523	523	514	505	499	500	502	491	456	492	804
21 *d*	401	363	333	301	357	394	426	428	445	476	486	490	504	511	543	546	568	536	529	516	494	494	488	475	*463*	104
22	459	484	492	495	493	497	504	507	507	501	498	495	490	490	495	502	502	512	511	507	501	499	498	498	497	937
23 *q*	499	499	499	499	499	500	500	498	496	491	485	481	483	486	489	494	498	498	498	498	497	497	495	496	495	875
24	497	496	495	495	495	496	497	498	495	493	488	484	485	488	492	497	507	507	503	501	498	488	489	487	495	871
25	483	486	488	491	494	495	495	497	497	495	488	478	476	476	479	488	495	496	497	498	502	500	495	495	491	784
26	494	494	495	495	495	494	495	498	495	491	486	480	476	482	487	490	493	491	493	497	497	497	495	495	492	805
27	494	494	495	495	494	494	495	496	494	490	487	480	477	483	490	495	500	504	500	498	497	495	493	493	493	833
28 *d*	493	490	486	477	470	462	465	474	484	487	490	500	493	495	504	515	526	551	601	560	533	506	469	477	*500*	1008
29 *d*	423	430	426	443	461	468	477	487	488	495	504	509	509	512	522	550	563	569	567	545	504	484	449	444	493	829
30 *d*	441	418	417	432	454	472	481	494	495	498	508	511	520	527	520	523	542	525	515	506	502	501	498	491	491	791
Mean	479	477	477	*476*	480	483	485	487	486	485	482	479	480	484	491	499	506	*507*	506	502	497	493	489	485	488	
Sum 14,000γ+	359	319	295	279	387	482	560	599	592	548	460	378	399	525	744	956	1168	1203	1191	1054	910	802	661	547		Grand Total 351,418

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — SEPTEMBER 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1	3332 3344	25	2332 3344	24	3331 3234	22	1011 3113	11	1	15
2	4333 3421	23	4233 3421	22	3331 2311	17	3100 1110	7	1	15
3	1112 2222	13	1112 2212	12	0011 1222	9	0000 0010	1	0	15
4	1222 2220	13	1212 2210	11	1220 1020	8	0000 0010	1	0	15
5 *q*	2111 1110	8	2111 1110	8	1010 0010	3	0000 0000	0	0	15
6	1201 1121	9	1201 1121	9	1100 0011	4	0000 0000	0	0	15
7	1011 3421	13	1011 3421	13	0010 2211	7	0000 0210	3	1	15
8	1012 3342	16	1002 3332	14	1011 2142	12	0000 0121	4	1	15
9	3313 2132	18	3213 2132	17	3311 1032	14	1200 0011	5	1	14
10 *q*	3100 2100	7	2100 2100	6	3100 0000	4	0000 0000	0	0	14
11 *q*	1002 1110	6	1002 1110	6	0000 0000	0	0000 0000	0	0	14
12 *q*	0101 2121	8	0101 2121	8	0000 1011	3	0000 0000	0	0	15
13	1344 3433	25	1344 3433	25	0333 2433	21	0012 1433	14	1	15
14	2122 3343	20	2122 3343	20	2122 2233	17	1011 1021	7	1	15
15	3332 1232	19	2332 1232	18	3322 0132	16	1110 0010	4	1	15
16	3312 3322	19	3212 3322	18	3311 2312	16	2200 0000	4	1	14
17	1211 2222	13	1211 2222	13	1110 1110	6	0000 0000	0	0	14
18	1003 4343	18	1003 4342	17	0001 2233	11	0000 0111	3	1	15
19	4232 3233	22	3222 3233	20	4132 3232	20	2100 1112	8	1	15
20 *d*	3433 4544	30	3233 4544	28	3433 3344	27	1101 3214	13	2	15
21 *d*	6644 4544	37	6644 4544	37	5544 4544	35	5533 3433	29	2	15
22	3211 3320	15	3201 3320	14	3211 1110	10	3000 0110	5	1	15
23 *q*	0012 2110	7	0012 2110	7	0011 2000	4	0000 0000	0	0	15
24	0012 2333	14	0002 2333	13	0011 1323	11	0000 0101	2	1	14
25	3001 1124	12	3001 1124	12	2000 0023	7	0000 0001	1	1	14
26	1011 0133	10	0011 0132	8	1000 0033	7	0000 0000	0	0	15
27	2111 1111	9	1011 1111	7	2110 1100	6	0000 0000	0	0	15
28 *d*	2334 3354	27	2334 3343	25	1332 2354	23	1222 1353	19	2	15
29 *d*	5443 3445	32	4443 3445	31	5433 3434	29	4322 2344	24	2	15
30 *d*	4333 4423	26	4333 4423	26	4333 3412	23	3322 2322	19	1	15
								Mean	0·77	15

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 22,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	966	958	933	953	949	955	949	933	928	920	915	921	928	939	949	948	944	952	952	959	960	961	960	960	945	692
2	961	958	960	962	959	961	958	951	944	931	932	934	941	947	948	947	946	951	962	960	958	958	964	963	952	856
3	966	964	965	965	965	966	966	962	954	944	941	937	942	949	949	947	956	959	965	969	947	953	955	958	956	944
4	958	958	960	964	961	956	956	950	939	931	927	929	939	948	952	956	958	960	966	968	968	970	961	963	954	898
5	959	962	963	962	968	962	958	956	953	948	948	945	946	945	954	947	948	946	949	960	964	962	965	964	956	934
6	968	971	972	970	967	963	962	959	953	941	933	925	924	935	945	955	962	962	964	965	967	970	966	967	957	966
7	969	964	972	961	967	967	968	968	956	936	908	935	945	950	947	957	956	964	970	972	966	961	962	962	958	983
8	962	961	961	962	966	970	972	968	960	950	944	951	970	950	940	945	947	960	970	960	957	971	968	966	960	1031
9 *d*	967	960	966	971	973	972	975	968	960	943	931	931	936	940	943	954	963	958	937	928	935	919	924	944	950	798
10 *d*	888	898	913	931	934	949	947	949	948	944	941	929	901	929	942	938	925	934	941	950	976	963	963	944	*937*	477
11	948	949	949	951	952	953	950	949	938	928	924	919	925	935	933	941	943	951	959	959	955	965	962	964	946	702
12 *d*	960	957	959	956	961	965	958	942	934	920	926	927	932	941	948	964	939	945	959	960	962	960	961	962	950	798
13	955	935	940	943	950	954	950	943	936	931	931	933	937	935	937	949	951	958	958	963	961	974	979	967	949	770
14	959	959	958	962	964	965	960	947	933	932	934	939	937	945	947	952	955	960	967	964	959	967	961	959	954	885
15	952	965	955	950	954	958	958	955	950	944	942	941	947	949	954	956	963	970	971	972	968	967	964	964	957	969
16	958	972	960	959	960	964	965	961	950	938	932	932	935	940	950	957	959	960	966	967	971	973	969	967	957	965
17	970	967	968	966	967	963	972	964	943	937	927	931	939	950	942	955	964	966	972	958	949	967	981	964	958	982
18	960	960	963	966	966	967	957	946	937	925	921	924	933	941	948	954	960	966	967	968	967	966	978	971	955	911
19	962	963	965	968	970	970	970	964	950	934	929	925	934	943	953	956	963	968	970	970	968	965	963	965	958	988
20 *q*	965	975	968	964	966	970	972	968	957	945	938	939	945	953	961	966	969	973	973	970	968	968	970	970	963	1113
21 *q*	968	967	968	968	969	970	967	960	948	934	922	926	932	945	958	965	967	970	970	971	971	971	970	970	959	1027
22	970	970	970	972	974	976	977	972	961	950	939	940	947	953	966	969	975	975	978	972	965	971	977	979	*967*	1198
23	974	975	985	972	973	971	966	955	951	939	928	926	919	936	940	951	957	961	953	949	967	968	974	969	957	959
24 *q*	968	968	968	968	968	972	967	958	948	938	936	938	941	939	936	948	958	962	964	965	965	966	967	965	957	973
25 *q*	967	970	967	966	964	964	962	958	954	945	936	937	940	946	953	957	961	962	967	969	969	970	968	972	959	1024
26 *q*	972	971	970	971	972	971	969	966	958	953	945	940	941	946	953	956	964	967	972	976	978	982	981	977	965	1151
27	982	981	981	980	978	978	977	974	955	935	938	939	938	940	940	940	943	951	962	958	948	966	971	966	959	1021
28 *d*	967	976	958	963	962	973	962	963	944	924	890	896	920	937	936	954	947	962	966	968	964	955	962	955	950	804
29 *d*	960	957	952	960	965	968	964	958	937	924	917	896	913	919	942	934	957	960	957	958	967	967	966	970	949	768
30	966	968	958	962	961	968	956	948	933	923	914	915	919	924	933	942	949	957	960	961	958	962	961	965	948	763
31	962	960	960	963	962	962	960	953	943	934	930	931	939	947	962	962	968	970	972	970	968	968	968	967	958	981
Mean	962	962	961	962	963	965	963	957	947	936	*930*	930	935	942	947	952	955	960	963	963	963	965	*966*	965	955	
Sum 28,000γ+	1809	1819	1787	1831	1867	1923	1850	1668	1355	1021	819	831	985	1196	1361	1522	1617	1760	1859	1859	1846	1906	1941	1899		Grand Total 710,331

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	49·2	46·1	49·1	48·9	49·0	48·5	47·9	46·6	47·8	49·1	52·0	56·5	57·9	57·4	56·3	55·1	53·8	53·0	51·9	49·7	50·9	51·9	51·9	51·9	51·3	132·4
2	50·3	50·4	51·4	50·5	49·4	49·2	48·5	47·3	47·4	49·6	52·2	55·9	59·2	59·3	57·9	55·6	54·1	53·0	51·3	46·2	48·9	51·0	51·4	51·4	51·7	141·4
3	51·1	50·6	50·4	49·9	50·1	49·6	49·9	48·4	47·2	48·0	51·0	55·2	58·8	61·8	60·8	57·2	54·9	53·0	53·0	52·7	49·2	50·8	49·8	48·4	52·2	151·8
4	49·6	50·8	50·8	50·3	49·9	49·4	49·2	48·2	47·8	48·3	50·4	53·2	55·6	55·8	55·1	54·4	53·1	52·9	52·6	51·8	51·8	51·6	48·9	50·4	51·3	131·9
5	48·9	48·9	48·6	48·8	49·5	48·4	48·6	47·6	49·1	49·2	49·9	52·1	55·5	55·1	56·6	55·2	52·2	50·9	50·1	51·2	50·6	49·8	50·3	49·9	50·7	117·0
6	50·8	51·4	50·0	51·4	51·9	50·1	49·3	47·9	46·7	46·7	49·8	53·9	57·6	58·7	57·9	55·5	53·7	53·2	52·3	51·6	51·0	51·2	50·6	49·8	51·8	143·0
7	46·7	47·0	45·9	49·5	50·4	50·3	49·3	47·9	47·2	50·1	53·2	56·9	59·4	60·1	57·1	56·4	53·5	53·0	53·1	52·9	51·9	50·5	50·8	50·6	51·8	143·7
8	50·5	50·5	50·4	50·4	50·3	50·2	49·7	48·3	47·3	48·5	51·9	55·5	61·3	62·5	62·1	59·6	55·9	54·1	53·2	50·2	49·3	48·1	48·1	50·5	52·4	158·4
9 *d*	50·4	49·1	51·2	48·4	49·3	49·5	49·3	49·1	48·1	49·5	52·2	54·3	56·5	57·3	55·5	54·2	52·6	50·4	50·1	47·3	44·8	42·7	38·9	40·1	49·6	90·8
10 *d*	33·4	36·6	41·3	47·7	48·0	48·6	48·3	47·1	47·0	46·6	50·4	56·6	57·6	59·1	54·5	57·8	53·2	49·1	45·2	49·9	48·5	49·2	43·1	47·6	*48·6*	66·4
11	50·4	50·6	50·3	49·4	49·8	49·2	49·2	47·9	47·3	48·7	53·2	55·9	58·7	58·3	59·0	52·3	53·9	53·2	52·3	52·4	50·9	51·3	51·3	50·6	51·9	146·1
12 *d*	47·2	52·5	46·4	48·1	47·9	51·5	51·1	47·3	46·9	47·3	50·3	53·8	55·3	55·9	55·6	55·7	54·4	52·4	52·2	51·4	51·6	50·7	51·1	47·2	51·0	123·8
13	39·1	39·8	44·6	48·4	49·8	49·4	49·7	49·2	48·8	49·7	51·8	54·9	55·8	56·6	55·2	54·4	53·0	51·5	52·0	51·6	50·8	49·4	49·7	50·2	50·2	105·4
14	50·4	50·6	50·4	50·1	49·3	48·7	48·8	48·0	47·9	49·4	51·5	55·2	55·5	58·0	57·1	55·2	54·2	50·6	52·4	52·7	41·5	45·2	47·3	46·4	50·7	116·4
15	48·0	51·1	45·4	48·8	48·8	48·9	48·9	47·9	47·5	48·9	51·6	54·2	55·0	55·5	55·6	55·4	54·9	54·2	53·4	52·6	51·6	50·8	50·2	49·8	51·2	129·0
16	47·0	47·8	48·9	50·2	49·8	49·2	49·3	48·4	47·6	48·4	50·6	53·8	56·2	56·6	56·3	55·3	53·6	52·1	51·7	51·7	48·5	49·1	50·8	50·8	51·0	123·7
17	51·3	51·2	50·9	51·9	50·3	50·7	53·2	50·4	48·9	49·4	52·4	54·1	58·2	61·0	58·6	56·8	55·0	53·5	53·2	50·9	51·0	48·1	47·9	49·1	52·4	158·0
18	50·2	50·1	49·7	49·6	50·4	49·2	49·1	48·4	47·2	47·5	51·0	54·0	55·7	56·7	56·4	54·3	52·7	52·1	52·0	51·7	51·6	51·1	44·9	48·1	51·0	123·7
19	50·2	50·8	50·6	50·6	51·6	50·3	49·5	47·6	45·6	46·4	49·8	53·2	56·1	57·7	56·8	55·0	53·0	52·9	52·6	52·0	50·6	50·0	50·4	50·2	51·4	133·5
20 *q*	50·1	50·0	50·2	50·1	50·2	50·5	49·9	48·5	47·0	48·0	51·3	55·7	58·7	58·2	56·9	55·0	53·8	53·1	52·2	52·6	51·7	51·0	50·9	50·9	51·9	146·5
21 *q*	51·0	50·9	50·8	50·9	50·7	50·3	49·4	48·2	46·5	47·5	50·8	54·7	56·7	56·9	55·4	53·9	52·6	52·2	51·9	51·5	51·1	50·8	50·7	50·4	51·5	135·8
22	50·7	50·8	50·8	50·5	50·8	50·6	49·6	48·3	46·6	47·4	50·2	54·0	56·4	56·9	57·2	55·3	54·8	54·0	54·2	53·8	51·5	50·1	51·2	51·4	52·0	147·1
23	50·0	50·3	48·9	48·3	48·2	49·3	48·5	48·2	47·9	47·5	50·0	55·3	56·4	57·6	57·1	55·9	54·2	53·2	53·0	48·2	50·5	50·6	49·0	49·6	51·2	127·7
24 *q*	50·5	50·8	51·1	51·0	50·3	50·7	49·4	47·8	47·4	49·0	53·6	56·8	58·2	58·3	58·3	57·6	54·1	52·7	51·0	51·2	51·1	50·6	49·8	49·6	52·1	150·9
25 *q*	50·2	50·2	50·2	50·0	49·8	49·8	49·7	48·9	48·7	49·4	51·8	55·1	56·8	56·9	56·3	54·5	53·4	52·0	52·1	51·9	51·0	49·9	50·2	50·2	51·6	139·0
26 *q*	50·2	50·2	50·6	50·8	50·8	49·9	49·7	48·6	47·6	47·6	49·6	52·8	55·0	56·5	56·8	55·6	54·5	53·6	52·7	52·8	52·9	52·5	52·1	51·6	51·9	145·0
27	50·8	50·4	50·4	50·1	50·2	49·7	49·4	47·9	47·7	50·0	51·0	54·6	58·1	59·2	61·0	58·6	56·7	52·5	53·0	51·9	47·6	49·8	50·4	50·1	52·1	151·1
28 *d*	49·3	48·3	48·5	49·3	50·2	50·8	51·7	52·6	50·1	48·4	56·4	56·6	59·8	62·0	59·7	58·0	58·1	57·2	56·4	53·7	52·2	39·1	50·7	48·6	*52·8*	167·7
29 *d*	49·3	48·0	47·3	49·9	50·1	49·7	49·1	47·6	46·3	46·9	50·7	55·5	60·1	63·3	62·2	61·3	59·2	57·2	56·4	51·1	51·2	50·6	51·4	51·6	52·7	166·0
30	50·6	49·6	50·7	51·0	48·0	45·5	48·0	47·7	46·4	47·5	50·6	54·1	55·8	55·7	54·7	52·9	51·6	51·4	51·2	50·9	50·6	50·3	50·6	51·2	50·7	116·6
31	51·1	51·1	51·1	50·9	50·6	50·2	49·2	47·9	46·8	47·4	49·7	52·3	54·2	55·0	55·4	53·4	53·0	52·9	52·9	52·6	52·2	51·5	50·9	50·9	51·4	133·2
Mean	49·0	49·2	49·3	49·9	49·9	49·6	49·4	48·3	*47·5*	48·3	51·3	54·7	57·2	*58·1*	57·3	55·7	54·1	52·8	52·3	51·4	50·3	49·7	49·5	49·7	51·4	
Sum 1400·0′+	118·5	126·5	126·9	145·7	145·4	137·9	132·4	95·7	72·3	97·9	190·9	296·7	372·1	399·9	375·4	327·4	277·7	237·1	221·6	192·7	158·6	139·3	135·3	139·1		Grand Total 38263·0

GEOMAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	486	476	475	478	490	493	498	502	498	492	486	483	487	491	497	500	503	501	502	501	500	498	497	497	493	831
2	498	498	497	494	495	495	497	497	491	488	484	481	486	492	500	505	509	508	506	508	502	500	498	498	497	927
3	498	498	497	495	493	493	492	493	492	491	488	484	485	487	493	497	499	496	496	498	508	509	504	503	495	889
4	501	499	498	498	497	495	495	497	497	491	483	480	480	483	490	494	496	493	493	494	495	495	500	498	493	842
5	500	499	497	497	491	490	490	491	491	489	488	486	486	487	490	501	509	512	514	505	502	500	499	498	496	912
6	497	492	489	484	482	487	491	494	494	491	486	482	483	490	497	499	498	497	496	495	494	493	494	495	492	800
7	492	492	491	491	491	493	493	493	495	494	492	487	487	494	498	503	504	500	498	497	497	501	498	497	495	878
8	497	496	496	494	493	493	493	493	491	483	477	474	474	487	493	496	501	500	499	506	507	502	495	495	493	835
9 *d*	497	498	490	488	490	492	493	493	493	492	486	485	486	488	493	495	499	505	520	536	511	497	476	415	492	818
10 *d*	401	418	427	449	486	496	499	501	497	493	487	491	504	521	547	541	544	537	528	544	502	476	478	488	494	855
11	493	495	498	500	499	498	499	500	498	495	490	487	486	490	505	530	515	504	501	502	503	500	499	498	499	985
12 *d*	498	478	458	469	474	471	473	484	490	491	488	487	488	489	491	500	512	511	504	502	500	502	500	502	490	762
13	484	462	477	485	491	493	496	499	496	492	492	492	493	497	496	499	503	503	501	499	501	497	492	486	493	826
14	492	493	496	494	495	496	496	499	499	498	496	494	496	498	501	503	507	507	503	503	510	501	496	498	499	971
15	496	465	476	485	491	494	495	495	492	488	484	485	489	490	490	491	495	493	494	495	496	496	498	498	490	771
16	501	492	490	492	495	495	495	496	496	491	488	484	485	487	490	495	496	496	496	496	495	493	491	492	493	827
17	492	491	491	491	488	489	485	487	490	486	484	484	487	490	496	500	498	496	496	505	512	507	493	491	493	829
18	895	896	896	494	493	492	495	496	496	494	488	485	485	490	495	499	498	496	496	496	496	497	497	489	494	854
19	492	493	495	493	490	491	492	495	494	490	484	482	483	490	495	501	500	496	495	495	498	499	499	498	493	840
20 *q*	496	494	490	492	492	492	492	493	493	485	480	477	480	486	488	490	491	491	493	495	496	495	494	492	490	767
21 *q*	495	495	495	493	492	492	493	494	495	492	489	484	487	491	493	494	493	493	493	493	493	493	492	492	492	816
22	494	494	493	492	491	490	491	494	496	493	488	485	485	487	489	492	493	492	493	500	503	500	496	494	493	825
23	493	492	475	480	482	487	490	493	490	490	487	488	492	492	493	500	503	503	506	508	501	496	495	495	493	831
24 *q*	495	495	492	492	492	492	492	495	495	491	484	482	483	490	496	501	503	502	501	496	498	496	495	495	494	853
25 *q*	495	492	492	492	495	495	495	496	494	487	478	477	483	487	491	496	496	497	496	495	495	495	492	491	492	802
26 *q*	490	490	490	490	490	490	492	493	494	489	479	476	479	485	490	495	493	493	492	492	492	491	490	490	*489*	745
27	490	488	487	487	489	488	489	493	496	495	490	485	490	495	493	502	512	515	506	507	513	504	496	495	496	905
28 *d*	493	487	488	490	490	488	489	489	492	492	492	496	492	493	505	509	505	502	503	509	515	528	511	503	498	961
29 *d*	500	496	495	492	493	494	497	500	503	500	493	493	495	497	504	532	522	515	516	523	511	508	505	500	*503*	1084
30	496	493	492	482	487	485	489	498	506	508	507	507	508	513	515	511	507	505	502	501	501	500	500	498	500	1011
31	498	497	497	496	496	495	497	501	502	500	495	491	493	496	495	495	494	495	495	496	497	497	497	497	496	912
Mean	492	489	488	489	491	491	493	495	495	492	487	*486*	488	492	497	502	*503*	502	501	503	501	499	496	493	494	
Sum 15,000γ+	245	144	120	149	213	234	273	344	346	251	113	54	117	253	409	566	598	554	534	592	544	466	367	278		Grand Total 367,764

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — OCTOBER 1967

	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1	4222 2220	16	4212 2220	15	3222 1010	11	1110 0000	3	1	15
2	1100 1131	8	1000 1131	7	1100 0130	6	0000 0010	1	0	15
3	0112 2232	13	0112 2232	13	0011 2032	9	0000 0021	3	1	15
4	2100 1112	8	0100 1112	6	2100 0002	5	0000 0000	0	0	15
5	1221 2221	13	1110 2221	10	1221 2220	12	0100 0110	3	0	15
6	1211 1102	9	1111 1102	8	1211 1101	8	1100 0000	2	0	15
7	2211 2211	12	2111 2211	11	1201 2110	8	0000 1000	1	0	15
8	0013 4333	17	0013 4333	17	0002 3133	12	0000 0011	2	1	15
9 *d*	2212 1245	19	2112 1245	18	2212 1144	17	1000 0135	10	1	15
10 *d*	4333 4354	29	4333 4354	29	4222 3344	24	3401 4132	18	2	15
11	1112 3222	14	1112 3221	13	1111 3222	13	0000 3300	6	1	15
12 *d*	4332 1414	22	3232 1412	18	4332 1214	20	3220 0210	10	1	15
13	3202 2223	16	3102 2223	15	3202 2112	13	3100 0001	5	1	15
14	0122 2343	17	0112 2332	14	0122 2243	16	0000 0011	2	1	15
15	4111 1211	12	3111 1211	11	4110 0101	8	3100 0000	4	1	15
16	2211 1122	12	2211 1122	12	2211 1022	11	1000 0000	1	0	15
17	1221 3233	17	1221 3233	17	0121 3123	13	0010 0022	5	1	15
18	1112 1113	11	0112 1113	10	1111 1003	8	0000 0001	1	0	15
19	1211 2111	10	1001 2110	6	1200 1011	6	0000 0000	0	0	15
20 *q*	2001 1011	6	2001 1011	6	1000 1010	3	1000 0000	1	0	15
21 *q*	0001 0000	1	0001 0000	1	0000 0000	0	0000 0000	0	0	15
22	0001 2232	10	0001 2232	10	0000 2122	7	0000 0011	2	0	15
23	3111 1132	13	3111 1132	13	3101 0131	10	2000 0110	4	1	15
24 *q*	0101 2111	7	0001 2111	6	0100 1111	5	0000 0000	0	0	15
25 *q*	1001 0111	5	1001 0111	5	1001 0010	3	0000 0000	0	0	15
26 *q*	1001 1111	6	1001 1111	6	0001 0001	2	0000 0000	0	0	15
27	1112 2332	15	1112 2332	15	1111 2231	12	0000 0212	5	1	15
28 *d*	3233 3345	26	3233 3334	24	2123 2345	22	1011 1123	10	1	15
29 *d*	3233 4432	24	2223 4432	22	3131 4432	21	0001 2321	9	1	15
30	3432 1211	17	2332 1211	15	3431 0110	13	1120 0000	4	1	15
31	1002 3121	10	1002 3121	10	0002 3110	7	0000 0000	0	1	15
								Mean	0·58	15

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — NOVEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 22,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	965	964	964	966	969	970	968	964	954	944	936	939	947	955	959	967	972	976	967	961	962	962	964	963	961	1058
2	963	965	973	965	964	969	968	962	947	945	936	930	934	944	944	955	962	952	947	949	956	932	937	942	952	841
3 *d*	941	948	950	952	957	958	960	952	942	938	939	940	943	953	936	937	955	921	950	921	933	939	948	952	*944*	665
4	949	952	957	949	953	960	957	954	947	933	921	916	918	930	944	957	964	969	967	965	964	963	958	961	950	808
5	960	949	957	959	962	969	969	970	959	945	935	930	931	938	943	939	942	950	951	960	941	945	949	951	950	804
6	958	959	960	962	962	967	968	962	955	950	943	940	940	944	951	960	966	969	968	969	968	971	968	966	959	1026
7 *q*	966	966	968	970	971	970	974	975	971	964	962	957	960	963	962	965	971	976	974	973	975	972	972	971	969	1248
8 *d*	972	968	953	958	958	964	968	963	962	957	958	949	952	957	962	956	958	963	970	944	919	926	943	951	955	931
9	950	946	947	947	949	951	952	952	950	946	937	931	935	928	930	947	944	958	968	954	958	962	960	960	948	762
10	956	957	956	958	960	963	965	962	957	949	941	939	935	942	951	955	962	965	962	965	960	963	965	962	956	950
11	964	960	960	960	962	969	968	967	963	953	946	943	948	957	962	970	974	980	983	981	971	968	967	948	963	1124
12 *d*	951	955	960	950	956	952	951	962	956	936	932	931	939	949	955	952	943	947	928	956	915	943	957	960	947	736
13 *d*	958	955	962	964	958	956	958	955	945	938	934	938	943	945	947	951	960	949	963	958	959	960	994	958	955	908
14	957	947	954	958	964	964	954	965	961	953	946	939	949	957	958	953	955	955	959	965	969	962	965	964	957	973
15	962	962	962	963	965	965	961	963	961	954	950	945	944	938	950	956	947	930	932	937	953	962	958	955	953	875
16	952	953	957	955	954	965	966	962	956	947	942	939	941	942	957	960	961	967	968	965	963	968	965	966	957	971
17 *q*	960	960	962	963	965	965	966	962	958	950	947	945	948	954	958	960	964	968	968	968	967	966	966	966	961	1056
18 *q*	967	961	960	963	966	971	971	970	965	959	953	952	956	965	968	966	967	967	969	971	969	969	969	967	965	1161
19 *q*	967	967	968	968	971	969	971	970	964	957	952	952	956	965	968	968	966	965	973	975	974	969	969	969	966	1193
20 *q*	966	967	968	970	971	974	975	972	966	958	953	952	954	960	965	966	970	974	976	976	975	975	973	972	968	1228
21	971	972	973	975	978	980	980	977	969	961	953	952	958	965	976	979	985	986	984	979	975	988	977	957	*973*	1350
22	962	968	971	970	977	990	978	954	963	950	945	943	940	931	951	959	963	969	968	961	964	968	966	965	961	1076
23	965	964	967	971	975	973	973	970	962	951	946	943	948	949	945	951	959	963	973	975	969	967	967	972	962	1098
24 *d*	948	962	968	966	971	963	987	973	962	941	927	933	935	932	947	953	952	944	941	940	945	933	947	951	951	821
25	936	953	955	956	956	958	961	961	962	959	948	930	928	930	941	939	935	937	944	939	932	943	956	957	947	716
26	964	969	959	959	961	966	968	966	955	944	946	945	950	949	938	949	954	956	956	952	953	963	968	966	957	956
27	970	970	970	970	968	981	976	980	970	967	960	957	960	961	960	963	962	961	944	941	944	947	953	945	962	1080
28	945	965	964	966	980	978	968	958	951	949	944	941	944	947	949	953	954	969	953	932	936	935	932	950	953	863
29	951	953	959	958	961	972	974	977	967	938	956	960	944	948	950	953	952	949	957	963	964	966	965	970	959	1007
30	971	966	967	965	970	980	977	976	979	967	955	945	946	950	952	954	963	967	966	928	923	944	925	949	958	985
Mean	959	960	962	962	965	*968*	*968*	965	959	950	945	*942*	944	948	953	956	959	960	961	957	955	958	960	959	957	
Sum 28,000γ+	767	803	851	856	934	1032	1032	956	779	503	343	256	326	448	579	693	782	802	829	723	656	731	803	786		Grand Total 689,270

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — NOVEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	50·8	50·7	50·6	50·6	50·3	49·7	49·2	48·6	47·9	49·0	52·1	54·9	56·6	57·0	55·4	54·1	53·8	53·7	53·8	53·3	49·6	48·1	49·3	50·2	51·6	139·3
2	48·9	49·5	47·3	47·4	48·4	47·4	47·6	47·8	47·8	50·0	52·9	56·3	58·3	59·0	57·5	56·7	55·8	54·8	52·9	52·5	45·4	43·7	45·7	43·9	50·7	117·5
3 *d*	47·3	46·5	47·9	51·0	50·7	50·0	48·7	48·9	47·8	48·9	51·2	54·0	54·9	57·6	57·1	54·8	55·8	48·2	45·7	47·6	41·3	43·5	46·6	48·2	*49·8*	94·2
4	49·8	52·9	46·9	48·1	50·0	48·5	49·2	48·4	48·1	48·0	49·5	52·6	54·3	56·6	55·7	55·7	54·4	53·8	52·9	52·0	51·2	50·8	49·4	47·7	51·1	126·5
5	46·6	50·0	51·3	50·7	50·2	48·2	51·0	53·2	50·9	49·7	51·4	51·8	53·6	53·7	55·4	53·5	51·6	52·5	51·4	46·5	46·7	47·5	46·8	47·4	50·5	111·6
6	50·6	51·2	51·4	51·1	50·8	50·6	50·0	49·6	48·5	48·7	50·6	53·2	55·0	55·5	54·6	52·9	52·5	51·9	51·9	51·1	51·3	49·4	50·4	50·6	51·4	133·4
7 *q*	50·6	50·8	50·9	51·0	50·6	50·4	50·5	50·5	49·6	49·3	51·9	53·4	54·9	55·6	54·4	53·6	53·3	53·3	52·6	52·3	51·8	51·4	51·1	50·8	51·9	144·6
8 *d*	49·1	50·9	49·4	46·0	49·5	49·3	49·6	49·3	48·9	49·0	51·2	51·6	53·1	55·0	56·3	57·0	54·8	52·2	53·0	42·1	41·3	42·7	46·4	48·9	49·9	96·6
9	51·1	50·3	49·3	49·4	49·9	49·4	49·2	48·6	48·4	49·3	49·9	52·2	55·4	56·1	55·5	54·4	53·3	51·4	45·8	50·3	51·0	50·1	50·1	50·2	50·9	120·6
10	49·9	49·8	50·0	49·9	50·2	50·1	50·0	49·7	48·8	48·9	50·7	53·7	54·3	55·3	54·0	52·8	52·9	51·9	51·6	51·9	51·2	51·2	50·5	50·0	51·2	129·3
11	49·7	50·6	50·1	49·4	50·5	50·1	49·8	49·9	48·7	48·3	50·3	52·8	54·6	55·6	54·9	54·2	53·8	53·6	52·9	54·0	47·0	36·2	42·6	48·1	50·3	107·7
12 *d*	49·1	49·8	49·7	48·7	48·4	49·8	52·0	49·5	50·1	49·2	52·3	53·1	54·6	55·6	55·5	54·6	50·7	49·8	47·0	47·2	42·1	47·3	47·5	48·9	50·1	102·5
13 *d*	47·8	49·3	48·9	52·0	48·0	48·7	48·9	48·6	48·3	48·4	50·1	52·9	53·5	54·2	53·8	53·4	51·8	49·1	44·0	46·0	49·5	49·3	49·5	48·2	*49·8*	94·2
14	47·2	49·2	51·5	51·0	50·4	50·2	51·4	50·2	48·3	48·0	50·8	52·4	54·2	55·2	55·2	52·9	50·1	50·2	52·7	51·5	50·3	50·2	49·4	49·0	50·9	121·5
15	50·2	50·5	51·1	50·8	50·7	50·4	50·3	49·8	49·0	48·5	50·6	52·5	54·9	55·4	54·2	55·5	54·8	50·9	56·3	51·5	50·2	49·7	47·4	46·4	51·3	131·6
16	47·6	49·8	49·9	50·7	52·7	51·3	49·8	49·2	49·1	48·3	50·8	53·3	54·2	54·8	54·2	54·3	52·0	52·9	52·7	51·7	50·7	50·2	49·4	49·9	51·2	129·5
17 *q*	50·2	50·5	50·2	50·3	50·7	50·3	50·2	50·0	49·3	48·9	50·4	52·5	53·6	54·0	53·5	52·9	52·5	51·8	51·5	50·9	50·9	50·8	50·8	49·4	51·1	126·1
18 *q*	49·3	49·9	50·8	50·9	51·0	50·2	50·2	49·0	48·7	48·6	50·2	52·1	53·6	54·3	54·0	53·7	52·9	52·0	52·0	51·7	51·1	50·2	50·2	50·0	51·1	126·6
19 *q*	49·6	49·7	49·8	50·4	50·1	50·8	50·2	49·7	48·8	48·5	49·8	51·9	53·7	54·2	53·8	53·0	52·9	52·0	51·8	51·1	50·6	50·1	50·1	50·1	50·9	122·7
20 *q*	50·1	48·9	49·7	50·2	50·9	50·6	50·1	49·6	48·7	48·5	50·5	53·0	53·9	53·8	53·7	53·7	53·4	52·8	52·0	51·4	50·9	50·7	50·3	50·2	51·1	127·6
21	50·4	50·8	51·1	51·6	51·7	51·3	50·8	50·2	49·3	49·1	50·9	53·3	55·0	55·5	55·1	54·9	54·1	53·7	52·9	52·5	52·1	49·9	41·3	45·1	51·4	132·6
22	50·0	50·7	50·3	50·5	51·8	51·5	48·9	51·3	54·5	52·9	51·8	53·0	56·2	55·4	55·6	54·5	53·6	52·9	52·8	51·6	49·3	49·5	49·8	50·1	*52·0*	148·5
23	50·5	50·3	51·2	51·9	51·3	51·1	50·2	50·0	49·1	49·4	50·2	51·9	55·4	57·1	54·9	54·3	53·0	51·9	50·5	50·9	50·7	49·6	49·4	44·4	51·2	129·2
24 *d*	40·9	50·7	47·2	50·0	50·1	53·4	60·3	55·2	51·6	50·9	52·0	54·4	56·2	55·6	53·7	54·2	52·8	52·9	52·9	52·7	47·1	41·5	46·0	45·5	51·2	127·8
25	46·3	47·1	47·9	50·2	51·3	51·1	50·7	50·2	49·7	50·1	51·6	52·6	55·3	54·7	55·9	55·2	55·4	54·0	52·0	49·2	46·1	48·8	49·1	48·9	51·0	123·4
26	50·6	48·3	49·0	49·7	50·2	49·9	50·3	50·2	49·7	49·9	51·2	52·7	55·3	55·4	54·2	54·5	53·9	53·4	52·9	50·5	48·2	47·6	50·1	49·8	51·1	127·5
27	48·9	49·6	50·6	50·7	52·3	51·2	51·0	51·6	50·9	51·1	52·9	53·9	54·9	54·2	53·1	52·9	51·8	51·7	48·7	48·8	45·6	44·7	45·1	44·0	50·4	110·2
28	42·8	42·8	39·8	43·5	46·2	51·2	55·6	51·1	47·7	49·0	51·8	54·0	54·3	56·3	56·8	56·3	56·2	51·9	54·1	51·8	48·7	47·2	46·5	47·1	50·1	102·7
29	43·2	48·3	49·3	49·7	50·6	50·4	50·0	50·2	50·2	53·4	55·0	54·9	54·2	52·6	53·5	53·4	53·7	51·3	50·2	50·9	49·7	48·8	49·5	49·8	50·9	122·8
30	50·2	49·6	50·8	50·8	50·8	50·5	51·6	54·7	52·7	51·3	51·2	52·3	53·8	54·9	55·6	54·9	53·8	52·3	50·8	44·5	44·1	42·6	41·5	37·9	50·1	103·2
Mean	48·6	49·6	49·5	49·9	50·3	50·3	50·6	50·2	49·4	49·4	51·2	53·1	54·7	*55·3*	54·9	54·3	53·4	52·2	51·4	50·3	48·5	*47·8*	48·1	48·0	50·9	
Sum 1400·0′+	59·3	89·0	83·9	98·2	110·3	107·6	117·3	104·8	81·1	83·1	135·8	193·2	241·8	260·2	247·1	228·8	201·4	164·8	142·3	110·0	55·7	33·3	41·8	40·7		Grand Total 36631·5

GEOMAGNETIC FORCE: VERTICAL COMPONENT

Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — NOVEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1	496	496	496	495	492	491	492	492	492	490	489	488	490	494	497	496	495	495	493	501	503	506	504	503	495	886
2	502	497	493	495	493	492	492	495	495	492	491	493	497	501	503	504	505	509	516	520	500	497	504	503	500	989
3 *d*	504	502	501	501	501	500	497	498	498	494	490	490	493	498	510	507	509	542	529	528	519	509	502	500	*505*	1122
4	498	488	472	478	487	492	496	498	500	501	501	500	500	501	501	501	501	500	498	498	498	499	500	498	496	906
5	493	492	492	492	494	495	492	490	495	498	496	499	501	503	506	512	517	514	515	512	509	508	504	501	501	1030
6	497	495	497	498	498	497	496	498	499	494	491	492	494	496	499	501	500	498	498	497	496	496	495	494	497	916
7 *q*	495	495	495	495	494	493	492	493	494	492	487	487	490	493	495	494	494	494	495	495	494	493	493	494	493	836
8 *d*	495	488	466	475	487	491	492	493	494	492	487	488	489	489	492	501	503	503	501	526	527	513	500	503	496	895
9	505	505	504	503	501	502	502	503	502	501	501	497	498	505	509	508	509	509	508	505	502	501	501	500	503	1081
10	501	500	499	498	499	498	498	498	501	498	496	496	498	501	503	503	503	502	503	502	503	502	501	501	500	1004
11	500	498	498	497	496	496	495	496	496	496	494	493	492	495	496	495	495	492	492	495	512	493	493	496	496	901
12 *d*	496	496	490	490	496	495	490	494	495	496	496	496	495	496	500	508	516	514	520	498	490	502	501	501	499	971
13 *d*	501	501	496	479	485	490	493	494	498	500	496	496	496	500	503	506	505	508	509	505	501	500	485	484	497	931
14	488	487	490	494	495	495	495	494	496	497	495	492	493	497	501	506	508	509	506	503	501	502	501	500	498	945
15	499	498	498	497	496	495	495	495	496	497	495	493	494	497	500	504	510	525	528	534	524	513	509	505	504	1097
16	503	501	500	498	496	495	496	496	496	496	492	492	495	499	501	502	503	501	500	501	502	501	502	501	499	969
17 *q*	503	501	500	498	496	496	496	496	497	496	495	492	495	498	500	500	498	497	496	496	496	496	496	498	497	932
18 *q*	497	496	496	496	496	496	495	495	495	495	493	494	494	492	495	497	499	498	498	497	498	498	498	499	496	907
19 *q*	498	497	496	496	496	495	495	495	496	496	491	492	492	494	496	497	501	500	497	496	496	496	496	496	496	900
20 *q*	497	498	496	495	495	494	493	494	495	494	491	490	495	497	496	496	496	495	495	494	494	494	494	494	495	872
21	494	494	494	494	493	492	492	493	495	495	490	489	490	492	492	490	492	492	493	494	496	492	478	481	492	797
22	487	488	490	490	489	485	487	490	485	492	492	494	500	506	502	501	500	499	500	501	501	499	498	496	495	872
23	496	494	493	492	492	493	494	495	496	496	496	494	494	497	501	503	503	503	500	498	498	498	497	493	497	916
24 *d*	492	477	466	477	485	486	472	477	488	494	496	496	501	505	508	509	511	517	522	526	521	515	505	495	498	941
25	474	478	486	489	492	494	496	496	496	495	495	498	502	508	513	517	520	524	522	523	524	516	507	503	503	1068
26	492	476	484	490	493	495	496	497	500	500	495	493	494	497	503	502	505	507	508	512	510	503	499	496	498	947
27	494	492	492	493	491	489	491	490	490	489	489	495	496	497	500	500	500	502	507	508	508	502	495	489	496	899
28	484	471	463	457	450	452	454	466	484	487	489	492	497	500	501	506	508	512	508	526	531	526	520	505	*491*	789
29	484	490	493	494	494	494	493	493	494	493	487	490	499	504	504	505	507	509	508	507	507	505	503	500	498	957
30	499	495	494	495	494	492	491	488	485	487	488	490	495	498	503	507	504	502	504	519	525	510	508	492	499	965
Mean	495	493	*491*	491	492	492	492	493	495	495	493	493	495	498	501	503	504	506	506	*507*	506	503	500	497	498	
Sum 14,000γ+	864	786	730	741	766	770	758	792	843	843	784	791	859	950	1030	1078	1117	1172	1169	1217	1186	1085	989	921		Grand Total 358,241

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

22 ESKDALEMUIR — NOVEMBER 1967

	3-h range indices K	sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1	0010 1122	7	0010 1121	6	0010 0022	5	0000 0010	1	0	15
2	2112 1243	16	2112 1243	16	2111 1142	13	1000 0132	7	1	15
3 *d*	3112 4553	24	1112 4553	22	3112 4553	24	1001 2432	13	1	15
4	3212 2103	14	2212 2102	12	3212 2103	14	3200 0000	5	1	15
5	3222 2241	18	2121 2241	15	3222 2241	18	0010 0110	3	1	15
6	2111 0111	8	1111 0111	7	2110 0011	6	0000 0000	0	0	15
7 *q*	0011 1100	4	0011 1100	4	0001 1000	2	0000 0000	0	0	15
8 *d*	3312 2343	21	3212 2343	20	3312 2343	21	3200 1132	12	1	15
9	2122 3330	16	2122 3330	16	2111 2230	12	0000 0010	1	1	15
10	1110 1111	7	1010 1111	6	0110 1011	5	0000 0000	0	0	15
11	1111 1156	17	1111 1156	17	1111 1055	15	0000 0032	5	1	15
12 *d*	2233 2453	24	2232 2453	23	2223 2352	21	1010 0230	7	1	15
13 *d*	2332 2334	22	2232 2334	21	2322 1333	19	1200 0112	7	1	15
14	2122 1321	14	2122 1221	13	2121 1311	12	1000 0000	1	1	15
15	0011 2333	13	0001 2333	12	0011 1333	12	0000 0222	6	1	15
16	2222 2212	15	1221 2212	13	2222 2101	12	0000 0000	0	0	15
17 *q*	0000 0001	1	0000 0001	1	0000 0001	1	0000 0000	0	0	15
18 *q*	1010 0111	5	1000 0101	3	1010 0010	3	0000 0000	0	0	15
19 *q*	1101 0110	5	1100 0110	4	0001 0000	1	0000 0000	0	0	15
20 *q*	1100 0000	2	1000 0000	1	1100 0000	2	0000 0000	0	0	15
21	0000 1124	8	0000 1124	8	0000 0004	4	0000 0002	2	1	15
22	2332 3121	17	2332 3121	17	2232 2021	14	0100 0000	1	1	15
23	1102 2123	12	1102 2122	11	1101 2113	10	0000 0001	1	0	15
24 *d*	4332 2233	22	3332 2223	20	4331 2133	20	2220 1112	11	1	15
25	3111 2232	15	3011 2222	13	3111 2231	14	2000 1102	6	1	15
26	3111 2222	14	3111 2212	13	2101 1122	10	2000 1001	4	1	15
27	1222 1132	14	1222 1132	14	1212 1121	11	0000 0002	2	1	15
28	3432 2433	24	3221 1433	19	3432 2333	23	2131 0123	13	1	15
29	3233 3211	18	3233 3111	17	3212 2211	14	1001 0000	2	1	15
30	1231 2244	19	1211 2243	16	1131 1144	16	0000 0032	5	1	15
								Mean	0·67	15

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

GEOMAGNETIC FORCE: HORIZONTAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

19 ESKDALEMUIR (H) — 16,000γ (0·16 CGS unit) + — DECEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 22,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	941	949	957	950	954	967	970	965	950	935	929	904	942	950	930	924	933	942	935	884	922	918	917	919	937	487
2	905	917	945	953	963	960	956	952	946	944	941	938	934	928	939	949	953	957	957	956	962	964	966	948	947	733
3	953	954	955	958	961	966	966	964	953	952	948	948	945	941	935	951	951	950	951	959	962	960	958	941	953	882
4	949	951	954	957	959	966	970	967	958	953	948	949	948	951	955	962	965	961	970	966	967	970	983	968	960	1047
5	964	965	967	966	970	974	977	975	972	970	969	969	966	971	976	976	978	953	960	962	954	938	942	955	965	1169
6	964	961	962	960	955	970	974	976	973	965	942	943	961	960	953	943	961	957	951	962	969	949	950	971	960	1032
7	940	922	944	945	949	956	963	954	943	949	951	949	942	944	952	937	970	965	963	969	962	965	962	963	952	859
8 *d*	958	964	971	962	965	962	951	970	960	960	959	961	960	962	954	963	957	965	953	998	1008	932	957	946	962	1098
9	949	948	954	953	957	957	958	957	957	955	953	952	955	954	960	960	970	949	968	950	957	961	964	959	957	957
10	956	964	963	957	963	963	964	964	957	951	956	952	951	960	962	963	967	967	964	965	966	965	962	963	961	1065
11 *q*	957	965	960	959	962	965	966	964	960	954	951	951	951	959	962	964	967	969	968	967	967	968	968	968	962	1092
12	965	962	958	956	958	964	964	962	959	953	946	947	954	959	963	968	967	962	963	970	969	972	969	963	961	1073
13 *q*	968	967	964	963	964	969	972	975	970	962	960	959	959	962	965	967	967	964	957	962	968	970	968	966	965	1168
14 *q*	967	970	965	961	962	970	973	976	972	964	959	960	960	957	956	953	963	956	972	969	969	974	970	967	965	1165
15	969	972	976	975	973	979	980	976	973	965	962	960	965	964	963	966	969	967	964	968	972	969	964	969	*969*	1260
16	966	962	972	976	979	976	976	973	972	966	963	962	964	965	970	966	967	960	952	959	957	959	948	961	965	1171
17	962	968	966	970	975	972	970	953	940	927	924	923	922	921	919	934	946	956	960	962	960	957	956	958	950	801
18	956	948	953	955	959	967	983	979	965	962	960	952	951	951	934	919	930	922	918	928	945	952	951	948	949	788
19 *d*	947	953	955	957	960	966	962	959	957	943	927	926	928	930	939	927	939	936	936	949	930	922	924	938	942	610
20 *d*	934	939	930	964	941	944	950	951	935	934	933	901	909	924	941	941	931	907	939	959	957	954	953	955	939	526
21	954	957	959	966	962	961	964	964	966	946	937	938	945	948	946	949	947	954	956	957	962	959	959	954	955	910
22	953	958	951	953	959	964	967	962	959	962	948	940	950	955	957	960	962	963	954	955	937	947	956	953	955	925
23	938	929	949	953	951	962	964	962	949	943	946	944	940	948	948	941	942	945	958	963	952	955	961	957	950	800
24	962	956	957	962	964	964	964	960	953	945	937	936	941	949	949	957	959	961	958	962	962	961	962	965	956	946
25 *q*	960	959	961	962	965	969	968	966	960	956	950	952	954	959	956	957	957	961	962	968	970	972	968	965	962	1077
26	964	968	968	967	970	970	972	970	959	952	949	948	950	949	957	947	936	922	947	946	953	958	960	961	956	943
27	967	960	962	963	964	964	962	962	956	951	944	944	945	950	932	935	952	957	960	962	962	963	964	968	956	949
28 *q*	967	967	968	968	966	968	968	967	964	961	956	953	957	962	966	965	965	967	966	947	953	945	942	943	960	1051
29	956	960	958	960	968	968	966	965	961	957	947	943	945	951	958	959	960	962	965	965	966	966	970	968	960	1044
30	971	972	976	977	982	979	976	979	976	965	958	962	962	964	953	964	964	966	957	953	943	956	950	942	964	1147
31 *d*	960	965	973	985	981	951	939	938	928	903	896	904	926	935	976	930	931	925	918	877	885	884	893	861	*928*	264
Mean	955	957	960	962	963	966	*966*	965	958	952	947	*944*	948	951	953	951	956	953	955	955	957	954	955	954	956	
Sum 29,000γ+	622	652	753	813	861	933	955	907	703	505	349	270	382	483	526	497	626	548	602	619	668	585	617	563		Grand Total 711,039

GEOMAGNETIC DECLINATION (WEST)
Mean values for periods of sixty minutes ending at exact hours, GMT

20 ESKDALEMUIR (D) — 9° + — DECEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 1100·0′+
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1 *d*	43·4	47·6	50·1	50·8	51·0	50·1	48·8	49·5	50·2	50·0	52·0	54·3	54·2	55·7	53·1	52·9	53·8	51·6	47·4	42·3	44·0	44·2	43·6	32·3	48·9	72·9
2	40·4	40·6	40·1	42·0	47·5	49·2	50·3	49·9	48·5	48·5	49·6	52·5	53·1	53·6	52·9	51·5	51·5	51·1	50·3	49·1	47·5	47·0	45·1	45·7	*48·2*	57·5
3	48·8	50·2	50·6	50·6	50·5	50·5	50·1	50·3	50·7	51·5	52·3	53·3	52·7	53·2	53·4	54·1	52·4	53·3	51·3	50·0	49·4	48·9	44·7	40·7	50·6	113·5
4	47·7	48·2	50·3	49·9	50·8	50·1	50·6	50·6	49·8	48·9	49·7	51·9	54·1	54·8	55·4	54·3	53·4	51·6	51·6	51·1	50·4	49·3	47·3	47·5	50·8	119·3
5	49·6	49·7	49·8	50·3	51·1	50·8	51·0	50·7	50·2	50·2	50·9	52·2	52·8	53·7	53·5	53·8	54·7	54·5	52·0	52·1	48·9	30·9	45·8	48·5	50·3	107·7
6	52·8	50·6	50·6	50·4	51·6	50·4	50·8	50·2	50·4	50·2	52·2	53·0	56·7	57·2	58·0	55·5	58·2	50·9	48·9	52·2	51·6	46·4	44·5	31·1	51·0	124·4
7	40·0	40·9	46·7	49·8	51·3	49·9	50·1	50·2	50·7	50·2	50·9	52·9	53·3	53·1	54·5	52·8	51·9	52·9	52·1	45·1	51·1	50·8	49·5	47·9	49·9	98·6
8 *d*	47·7	52·1	49·9	49·3	49·0	49·6	52·8	52·4	51·7	50·6	50·2	52·7	52·4	52·7	51·7	52·6	46·3	42·7	49·1	48·0	52·8	49·2	48·4	47·8	50·1	101·7
9	45·6	48·9	51·8	49·9	49·9	49·7	50·2	50·1	49·8	50·1	50·9	51·7	52·9	52·9	51·2	52·0	52·8	47·9	47·3	51·6	49·3	50·8	51·2	51·0	50·4	109·5
10	50·2	50·4	51·3	49·6	49·3	49·9	50·5	49·7	49·4	48·9	51·1	52·0	52·0	52·6	52·0	51·7	51·1	51·1	50·7	50·6	50·2	49·4	49·5	49·6	50·5	112·8
11 *q*	52·4	49·3	49·4	50·6	49·9	49·9	49·9	49·7	49·1	48·9	49·6	51·2	51·9	52·3	52·6	51·6	51·1	50·9	50·6	50·2	50·0	50·0	49·8	49·8	50·4	110·7
12	50·1	49·9	50·1	48·6	48·5	47·5	47·7	48·4	48·3	48·1	49·3	51·8	53·0	53·2	52·8	52·3	52·3	57·4	52·9	51·0	49·7	48·8	50·6	49·8	50·5	112·1
13 *q*	50·1	50·4	50·2	50·3	50·2	50·3	49·9	50·1	50·2	49·9	50·7	52·1	52·7	54·0	53·5	52·6	52·3	52·8	52·7	50·1	50·6	50·2	50·0	49·9	51·1	125·8
14 *q*	50·2	49·7	49·8	49·3	49·6	50·3	50·2	49·8	49·6	49·0	49·1	51·5	53·0	53·9	54·4	52·2	52·4	51·8	51·0	50·8	50·2	49·3	49·9	49·2	50·7	116·2
15	49·6	51·1	45·9	47·1	48·1	47·6	48·5	49·1	49·1	49·2	50·2	52·7	54·2	56·3	57·1	57·3	58·3	55·7	53·2	53·1	52·0	50·8	48·2	48·9	51·4	133·3
16	49·9	50·2	51·2	51·8	51·6	50·8	50·2	50·0	49·6	49·7	50·5	51·2	52·5	54·2	54·7	53·5	52·9	52·0	51·0	50·1	47·8	45·5	42·7	46·8	50·4	110·4
17	48·7	49·4	50·2	50·5	50·9	52·8	56·0	53·9	51·9	51·2	51·5	52·1	54·5	58·2	57·3	53·9	52·6	51·9	51·1	50·2	50·4	49·8	49·3	46·0	*51·8*	144·3
18	44·0	46·1	49·5	50·0	51·2	51·9	51·5	53·5	52·2	49·3	49·9	50·5	51·8	54·3	57·8	58·2	58·5	55·2	52·9	47·6	46·1	48·2	48·8	49·3	51·2	128·3
19 *d*	49·5	48·5	50·2	50·7	52·6	53·2	51·2	50·2	50·2	50·0	50·4	52·7	57·1	58·2	55·1	56·6	54·2	54·7	55·5	44·2	45·9	46·1	42·6	38·3	50·7	117·9
20 *d*	47·1	48·5	50·7	51·7	48·5	52·0	52·2	51·9	54·3	52·4	50·6	51·3	56·8	54·3	49·7	54·5	56·6	52·2	50·3	51·3	49·6	47·8	48·4	47·5	51·3	130·2
21	48·0	50·1	52·6	51·8	51·5	51·8	51·9	51·4	52·2	52·4	52·3	55·5	55·6	53·3	52·0	52·9	47·8	50·8	52·9	51·1	46·1	49·1	49·6	48·9	51·3	131·6
22	47·9	46·6	46·9	49·4	49·8	50·0	50·2	49·9	49·7	50·5	52·3	50·9	52·9	54·5	51·7	52·2	52·3	53·3	52·0	50·2	47·1	46·0	52·0	47·6	50·2	105·9
23	39·2	44·0	47·9	46·6	47·7	49·2	49·1	49·7	49·6	50·3	52·1	52·9	54·1	52·7	53·0	52·7	51·2	49·9	45·6	47·7	49·6	49·4	50·5	49·7	49·3	84·4
24	51·3	51·5	50·6	50·2	50·3	50·2	50·1	49·9	49·7	50·3	50·9	52·0	53·5	54·2	52·7	51·2	51·1	50·8	49·3	47·8	50·0	50·2	49·7	49·4	50·7	116·9
25 *q*	50·1	49·9	50·1	49·9	49·6	49·5	48·8	49·0	48·9	49·8	50·3	51·6	52·2	52·5	51·2	51·6	51·6	51·2	50·9	50·5	50·4	50·0	50·2	50·2	50·4	110·0
26	49·6	50·5	48·7	48·5	47·6	48·0	48·7	49·0	49·6	50·7	51·4	53·0	54·9	56·4	56·0	55·4	57·1	54·8	49·9	48·6	49·3	48·9	49·3	50·2	51·1	126·1
27	46·5	48·9	49·5	49·4	49·5	49·5	49·1	49·5	50·2	49·9	51·6	53·0	54·8	56·9	55·4	54·2	52·1	51·5	50·9	50·1	49·9	50·0	50·0	50·1	50·9	122·5
28 *q*	49·6	50·3	50·7	50·5	50·1	49·9	49·3	48·9	48·9	49·1	50·0	51·1	52·8	52·8	52·5	51·9	52·0	52·0	52·1	47·6	49·6	48·8	48·4	49·2	50·3	108·1
29	52·4	48·8	49·9	50·1	50·6	51·0	50·2	49·8	49·4	49·7	50·0	50·7	52·4	52·9	51·7	51·9	51·4	50·8	50·7	50·2	49·9	49·8	49·9	49·5	50·6	113·7
30	50·2	50·0	50·5	51·0	51·7	51·7	51·5	49·7	49·4	49·1	49·8	51·6	53·0	54·4	53·9	55·1	53·0	51·4	51·7	50·7	46·0	47·3	46·0	44·6	50·6	113·3
31 *d*	44·6	41·2	43·6	50·8	54·7	62·0	65·6	62·2	56·5	53·0	55·8	52·7	52·2	50·7	53·6	51·9	46·8	49·1	46·2	51·1	49·0	47·9	45·2	46·3	51·4	132·7
Mean	48·0	48·5	49·3	49·7	50·2	50·6	50·9	50·6	50·3	50·1	50·9	52·2	53·5	*54·2*	53·7	53·4	52·7	51·9	50·8	49·6	49·2	48·1	48·1	*46·9*	50·5	
Sum 1400·0′+	87·2	104·1	129·4	141·4	156·2	169·3	177·0	169·2	160·0	151·6	178·1	218·6	260·1	279·7	264·4	254·9	233·7	207·8	174·1	136·3	124·4	90·8	90·7	53·3		Grand Total 37612·3

GEOMAGNETIC FORCE: VERTICAL COMPONENT
Mean values for periods of sixty minutes ending at exact hours, GMT

21 ESKDALEMUIR (Z) — 45,000γ (0·45 CGS unit) + — DECEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean	Sum 11,000γ+
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
1 *d*	489	489	487	487	484	481	484	489	495	498	497	503	504	510	519	529	526	529	534	539	542	539	508	497	507	1159
2	466	439	438	456	467	477	487	498	503	502	500	500	504	504	505	512	511	509	507	507	505	502	499	499	*492*	797
3	500	501	501	502	502	501	500	500	498	497	495	499	504	510	523	523	521	520	521	516	510	508	508	508	507	1168
4	497	492	492	491	496	498	499	497	500	499	497	495	495	496	499	503	504	505	504	502	502	502	495	494	498	954
5	495	497	498	497	497	496	495	495	495	494	492	490	494	496	496	497	499	508	511	509	514	520	504	497	499	986
6	497	498	499	497	496	491	494	494	492	495	494	495	497	503	515	520	516	528	525	516	512	515	511	508	505	1108
7	484	488	491	494	496	499	500	498	500	500	498	497	501	503	505	515	512	507	508	508	502	501	502	502	500	1011
8 *d*	501	493	489	493	495	495	493	489	491	495	494	492	496	501	507	507	508	515	509	508	481	499	495	485	497	931
9	495	500	498	500	502	502	501	502	502	501	500	501	501	502	505	505	504	512	509	509	511	506	501	501	503	1070
10	502	497	491	497	499	499	500	500	501	502	500	499	502	502	502	505	504	503	502	503	502	502	502	502	501	1018
11 *q*	497	492	495	499	500	500	501	502	504	504	503	502	503	502	501	504	503	501	501	501	501	502	501	502	501	1021
12	500	500	503	505	504	502	502	501	504	504	504	502	503	503	504	505	505	504	505	505	505	504	503	504	503	1081
13 *q*	503	502	500	499	499	499	497	497	498	500	502	501	501	501	502	502	501	502	506	508	504	502	501	502	501	1029
14 *q*	500	496	497	499	499	499	497	497	499	500	500	500	500	501	502	506	507	503	502	501	500	500	499	500	500	1004
15	500	500	497	493	491	491	491	492	493	493	491	492	491	491	496	500	500	502	513	513	512	516	521	514	500	993
16	509	505	500	496	495	495	495	496	495	493	492	493	495	495	495	497	498	500	503	502	501	503	502	489	498	944
17	484	483	484	487	489	489	488	492	496	500	507	510	509	516	524	525	519	512	508	507	505	507	507	505	502	1053
18	503	500	497	498	497	496	494	490	489	490	492	495	490	495	512	529	541	542	550	538	521	509	507	507	508	1182
19 *d*	503	494	495	492	481	475	487	495	496	502	503	501	499	507	525	529	542	540	543	544	516	521	498	463	506	1151
20 *d*	485	495	483	459	471	486	493	499	500	507	510	513	519	523	542	536	542	552	539	521	514	512	510	508	509	1219
21	505	501	495	490	494	498	500	502	499	503	503	498	499	505	513	513	523	517	513	514	516	515	512	513	506	1141
22	512	510	508	504	503	502	500	502	502	504	502	503	504	510	512	511	509	508	511	514	520	521	504	486	507	1162
23	494	494	495	501	503	502	503	503	505	506	504	504	504	512	513	516	518	522	523	515	513	511	508	505	507	1174
24	501	504	507	507	506	506	507	507	508	510	510	510	507	512	513	512	511	509	511	511	507	507	506	503	508	1192
25 *q*	501	502	502	504	504	504	504	505	507	508	510	507	505	504	504	504	506	507	507	506	505	504	504	503	505	1117
26	504	498	496	498	499	500	500	502	505	507	509	508	508	510	512	517	525	539	531	524	516	511	508	506	510	1233
27	500	496	500	500	500	501	502	502	504	505	504	504	506	509	518	521	515	510	508	508	507	507	507	505	506	1139
28 *q*	504	502	501	500	501	501	501	502	503	505	506	502	501	502	505	502	501	502	503	512	510	512	514	515	504	1107
29	504	495	501	502	501	501	501	502	506	510	513	513	510	508	507	504	504	503	502	503	503	504	503	503	504	1103
30	502	501	500	495	494	495	496	497	497	501	502	500	497	501	504	501	501	502	506	508	509	497	492	489	499	987
31 *d*	487	474	461	449	447	452	460	466	488	497	512	533	543	552	586	593	595	579	575	551	580	571	534	499	*520*	1484
Mean	497	495	494	*493*	494	495	496	497	499	501	501	502	503	506	512	514	515	*516*	516	514	511	511	505	501	504	
Sum 15,000γ+	424	338	301	291	312	333	372	413	475	532	546	562	592	686	866	943	971	992	990	923	846	830	666	514		Grand Total 374,718

GEOMAGNETIC CHARACTER FIGURES (K, K_H, K_D, K_Z, AND C) AND TEMPERATURE IN MAGNETOGRAPH CHAMBER

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	3-h range indices K	Sum of K indices	3-h range indices K_H	Sum of K_H indices	3-h range indices K_D	Sum of K_D indices	3-h range indices K_Z	Sum of K_Z indices	Geomagnetic character of day, C (0-2)	Temperature in magneto-graph chamber °C
1 *d*	3334 3355	29	3334 3354	28	3222 2245	22	0111 2224	13	2	15
2	4412 1123	18	4312 1113	16	4412 1022	16	4320 1000	10	1	15
3	2111 2223	14	0011 2223	11	2101 2223	13	0001 2010	4	1	15
4	3211 1213	14	2211 1213	13	3101 0102	8	2100 0001	4	1	15
5	1101 2335	16	0101 1333	12	1101 2235	15	0000 0212	5	1	15
6	2223 3435	24	1223 3433	21	2123 3435	23	0100 2222	9	1	15
7	4233 3432	24	4233 3431	23	4223 3332	22	2010 0110	5	1	15
8 *d*	3333 3463	28	2332 3463	26	3223 2453	24	2010 0132	9	2	15
9	3111 2332	16	2110 2332	14	3111 2332	16	0000 0101	2	1	15
10	2212 0001	8	2112 0000	6	2211 0001	7	1000 0000	1	0	15
11 *q*	2000 0000	2	2000 0000	2	2000 0000	2	1000 0000	1	0	15
12	2201 1122	11	2200 1122	10	1101 0122	8	0000 0000	0	0	15
13 *q*	2111 1121	10	1011 0121	7	2101 1021	8	0000 0000	0	0	15
14 *q*	1111 0201	7	1110 0201	6	1101 0201	6	0000 0000	0	0	15
15	3211 1223	15	2111 1123	12	3210 1223	14	0000 1001	2	1	15
16	2202 2223	15	2202 2212	13	1102 1023	10	1000 0001	2	1	15
17	2231 2212	15	1121 2211	11	2231 2102	13	1011 1100	5	1	15
18	3332 3331	21	2332 3331	20	3332 2331	20	0001 3231	10	1	15
19 *d*	2322 3355	25	2322 3355	25	2322 3355	25	2220 2234	17	2	15
20 *d*	3434 4452	29	3334 4451	27	3423 4442	26	3312 3230	17	2	15
21	2113 2432	18	2112 2432	17	2113 2432	18	2100 0210	6	1	15
22	2122 2234	18	2122 2233	17	2122 2134	17	0000 0013	4	1	15
23	4222 3342	22	3221 3342	20	4212 1241	17	1000 0120	4	1	15
24	2000 1131	8	2000 1111	6	1000 0031	5	0000 0000	0	0	15
25 *q*	1001 1001	4	1001 1001	4	1000 0000	1	0000 0000	0	0	15
26	2101 2320	11	1000 2320	8	2101 2210	9	0000 0220	4	1	15
27	2111 3202	12	1011 3202	10	2111 3201	11	1000 1200	4	1	15
28 *q*	1100 1032	8	1000 1032	7	0100 1032	7	0000 0010	1	0	15
29	3110 1001	7	3110 0001	6	3100 1001	6	2000 0000	2	0	15
30	1211 2232	14	1111 2232	13	1211 2232	13	0000 0012	3	1	15
31 *d*	3543 5565	36	3433 5555	33	3543 5565	36	3233 4455	29	2	15
								Mean	0·87	15

q denotes an international quiet day and *d* an international disturbed day.

K_H For horizontal component. K_D For declination. K_Z For vertical component. (See Introduction).

MEAN MONTHLY AND ANNUAL VALUES OF GEOMAGNETIC ELEMENTS

For all, *a*, quiet, *q*, and disturbed, *d*, days for *H*, *D* and *Z* and for all days for *X*, *-Y*, *I* and *F*

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	Horizontal (*H*) component			Declination (*D*) (west)			Vertical (*Z*) component			North component (*X*) all days	West component (*-Y*) all days	Inclination (*I*) (north) all days	Total force (*F*) all days
	a	*q*	*d*	*a*	*q*	*d*	*a*	*q*	*d*				
	16,000γ +			9° +			45,000γ +						
	γ	γ	γ	′	′	′	γ	γ	γ	γ	γ	° ′	γ
Jan.	933	941	914	53·7	53·7	53·2	483	479	485	16681	2910	69 34·8	48533
Feb.	937	943	925	53·5	53·9	53·0	481	478	489	16685	2909	69 34·5	48532
Mar.	947	950	945	53·7	53·9	53·4	475	472	478	16695	2912	69 33·7	48530
Apr.	950	953	947	53·0	53·2	52·8	473	473	474	16699	2910	69 33·4	48529
May	937	952	875	51·7	52·1	50·3	477	477	473	16686	2901	69 34·4	48529
June	947	951	939	51·6	51·7	50·5	491	491	483	16697	2902	69 34·0	48545
July	959	959	956	51·7	51·9	51·4	487	488	485	16708	2904	69 33·2	48545
Aug.	962	961	963	51·9	51·9	51·4	485	486	484	16711	2906	69 32·9	48544
Sept.	951	958	933	51·3	51·7	49·9	488	486	488	16701	2901	69 33·7	48544
Oct.	955	961	947	51·4	51·8	51·0	494	492	496	16704	2903	69 33·6	48551
Nov.	957	966	951	50·9	51·2	50·1	498	495	499	16707	2900	69 33·6	48555
Dec.	956	963	941	50·5	50·6	50·5	504	502	508	16706	2898	69 33·8	48560
Year	949	955	936	52·1	52·3	51·5	486	485	487	16698	2905	69 33·8	48542

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF GEOMAGNETIC FORCE

ALL DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

24 ESKDALEMUIR 1967

NORTH COMPONENT

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+2·6	-2·3	+0·1	+2·1	+6·2	*+8·5*	+7·7	+6·7	+0·6	-3·8	-6·1	-8·3	*-8·5*	-8·1	-4·9	-4·5	-2·5	-0·8	-0·4	+1·2	+4·0	+3·5	+4·2	+2·7
Feb.	+4·3	+3·7	+5·5	+5·2	+7·0	+9·0	+11·1	*+12·3*	+8·3	-1·2	-12·6	-19·2	*-19·8*	-15·2	-10·2	-5·0	-2·3	-1·8	+3·9	+2·1	+0·5	+3·4	+5·9	+5·1
Mar.	+9·2	+7·4	+6·1	+6·9	+8·0	+10·1	*+11·7*	+11·2	+4·6	-6·7	-17·2	-24·3	*-27·1*	-22·1	-15·4	-8·4	-2·8	+2·3	+5·0	+6·4	+7·6	+7·4	+10·3	+9·6
Apr.	+10·1	+8·6	+6·2	+6·2	+9·4	+10·7	+8·3	+4·4	-8·1	-23·8	-31·3	*-34·5*	-31·7	-22·7	-10·9	0·0	+6·9	+11·1	+16·0	*+16·8*	+12·9	+12·0	+11·1	+12·1
May	-2·2	-13·6	-8·2	+2·5	+1·2	-7·6	-6·3	-11·7	-17·6	-24·6	*-29·0*	-28·1	-19·1	-9·9	0·0	+13·3	+19·5	+34·1	*+42·9*	+38·2	+28·5	+13·9	-0·3	-16·0
June	-2·5	-7·7	-0·7	+6·6	+7·5	+5·5	+0·2	-7·2	-13·7	-22·2	-30·6	*-30·7*	-26·2	-16·5	-5·8	+5·0	+12·7	+18·7	+24·1	*+26·7*	+21·1	+15·3	+12·5	+7·8
July	+6·8	+5·5	+4·5	+5·9	+5·4	+4·0	-0·2	-6·6	-15·6	-23·4	-28·2	*-29·4*	-24·4	-16·1	-6·4	+3·4	+8·3	+16·5	+21·7	*+22·9*	+18·2	+12·0	+8·0	+7·3
Aug.	+9·4	+7·0	+5·6	+5·4	+5·5	+5·3	+0·7	-7·7	-17·0	-24·1	*-29·0*	-28·4	-23·8	-16·7	-8·3	+2·7	+7·9	+14·1	+17·8	*+18·7*	+17·1	+14·3	+12·6	+11·0
Sept.	+11·3	+9·9	+8·5	+9·8	+11·4	+8·4	+2·1	-3·1	-12·0	-22·0	-29·8	*-31·4*	-25·7	-19·5	-9·3	+0·3	+6·5	+10·5	+11·7	*+15·1*	+14·4	+10·7	+11·7	+10·5
Oct.	+8·9	+8·8	+7·9	+8·7	+10·0	+11·9	+9·7	+4·8	-4·4	-15·7	-24·6	*-27·2*	-24·2	-18·4	-12·4	-6·1	-1·6	+4·0	+7·6	+8·3	+8·9	+11·2	*+12·5*	+11·1
Nov.	+3·5	+3·7	+5·5	+5·3	+7·5	*+10·8*	+10·4	+8·4	+3·2	-5·9	-12·6	*-17·1*	-16·1	-12·6	-8·0	-3·7	-0·1	+1·7	+3·2	+0·5	-0·1	+2·9	+5·1	+4·6
Dec.	+2·0	+2·5	+5·1	+6·6	+7·8	+9·7	*+10·2*	+8·8	+2·7	-3·4	-9·2	*-12·8*	-10·3	-7·6	-5·8	-6·5	-1·8	-3·6	-1·0	+0·6	+2·4	+0·8	+1·8	+1·0
Year	+5·3	+2·8	+3·9	+5·9	+7·2	+7·2	+5·5	+1·7	-5·8	-14·6	-21·7	*-24·3*	-21·4	-15·4	-8·1	-0·8	+4·2	+8·9	+12·8	*+13·1*	+11·3	+8·9	+8·0	+5·6
Winter	+3·1	+1·9	+4·1	+4·8	+7·2	+9·5	+9·9	+9·1	+3·7	-3·6	-10·1	*-14·3*	-13·7	-10·9	-7·3	-5·0	-1·7	-1·1	+1·4	+1·1	+1·8	+2·7	+4·3	+3·3
Equinox	+9·9	+8·7	+7·2	+7·9	+9·7	+10·3	+8·0	+4·4	-5·0	-17·0	-25·8	*-29·4*	-27·2	-20·7	-12·0	-3·6	+2·3	+6·9	+10·1	*+11·6*	+10·9	+10·4	+11·4	+10·8
Summer	+2·8	-2·2	+0·3	+5·1	+4·9	+1·8	-1·4	-8·3	-16·0	-23·3	-29·1	*-29·2*	-23·3	-14·8	-5·1	+6·1	+11·9	+20·9	*+26·7*	+26·6	+21·3	+13·9	+8·2	+2·5

WEST COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-9·6	*-11·7*	-11·2	-8·9	-7·8	-2·2	+0·5	-0·3	-2·3	-3·3	-1·0	+4·3	+12·4	*+16·6*	+16·0	+12·6	+10·8	+9·0	+3·0	-1·0	-3·8	-5·2	-8·4	-8·6
Feb.	-10·7	-8·2	-7·3	-4·4	-6·0	-5·0	-4·7	-6·9	-11·2	*-13·0*	-8·5	+3·2	+14·5	+22·0	*+22·1*	+18·2	+13·1	+8·9	+7·1	+5·1	-2·5	-4·7	-10·7	-10·6
Mar.	-6·3	-8·0	-6·0	-5·6	-5·6	-7·5	-9·1	-15·0	-22·0	*-22·3*	-14·1	+1·9	+19·2	+29·6	*+30·7*	+24·6	+16·3	+8·1	+3·9	+3·2	-0·5	-4·2	-5·4	-6·0
Apr.	-5·9	-10·1	-10·2	-9·5	-11·9	-15·5	-19·8	-27·5	*-30·2*	-22·5	-8·4	+9·3	+27·0	*+35·7*	+33·9	+26·5	+18·4	+11·9	+7·7	+3·4	-0·1	+0·8	-1·1	-2·0
May	-15·5	-21·0	-15·9	-12·4	-13·9	-19·9	-27·3	*-31·9*	-25·6	-16·9	-2·9	+14·3	+28·0	+33·9	*+35·7*	+33·2	+27·2	+24·3	+19·8	+12·7	+6·3	-1·3	-14·1	-16·7
June	-15·1	-12·4	-14·9	-13·6	-18·4	-24·8	-29·3	*-30·8*	-29·2	-22·9	-9·0	+8·0	+23·8	+33·3	*+35·5*	+34·4	+28·9	+22·8	+18·0	+11·2	+6·2	+3·9	+0·6	-5·9
July	-6·9	-8·1	-10·3	-12·6	-16·1	-24·8	-30·1	*-31·7*	-29·3	-21·5	-8·3	+7·1	+22·7	+32·7	*+34·3*	+31·5	+24·5	+17·9	+12·3	+9·4	+7·6	+2·7	-0·2	-2·8
Aug.	-6·8	-7·9	-8·3	-11·1	-16·2	-22·1	-28·9	*-29·5*	-26·0	-16·7	-2·6	+15·1	+30·6	*+38·5*	+37·4	+28·7	+17·1	+8·8	+6·3	+3·5	+1·4	+0·2	-4·8	-6·8
Sept.	-8·6	-8·9	-9·2	-11·0	-10·7	-13·2	-15·5	-17·1	*-19·3*	-14·1	-0·9	+15·3	+28·5	*+33·1*	+29·5	+24·1	+11·4	+6·3	+4·4	+0·1	-4·0	-6·4	-6·4	-7·3
Oct.	-10·7	-9·4	-9·5	-6·3	-6·2	-7·1	-8·3	-15·1	*-20·5*	-18·3	-4·8	+11·9	+24·5	*+30·0*	+27·1	+20·4	+13·2	+7·6	+5·7	+1·2	-4·2	-6·9	-7·3	-7·0
Nov.	-10·6	-5·6	-6·1	-3·7	-1·4	-1·3	+0·3	-2·1	-7·0	-8·2	-0·6	+8·2	+16·5	*+20·2*	+18·7	+16·4	+12·5	+6·7	+3·2	-2·6	-11·8	*-15·0*	-13·2	-13·5
Dec.	-12·6	-9·7	-5·2	-3·1	-0·4	+2·0	+3·3	+1·9	-0·7	-3·1	+0·2	+6·1	+13·2	*+16·9*	+14·7	+13·0	+10·5	+5·9	+0·9	-4·9	-6·5	-12·2	-12·0	*-18·2*
Year	-9·9	-10·1	-9·5	-8·5	-9·6	-11·8	-14·1	-17·2	*-18·6*	-15·7	-5·1	+8·7	+21·8	*+28·6*	+28·0	+23·7	+17·4	+11·5	+7·7	+3·4	-1·0	-4·1	-6·9	-8·8
Winter	-10·9	-8·8	-7·5	-5·0	-3·9	-1·6	-0·1	-1·9	-5·3	-6·9	-2·5	+5·5	+14·1	*+18·9*	+17·9	+15·0	+11·7	+7·6	+3·6	-0·9	-6·1	-9·3	-11·1	*-12·7*
Equinox	-7·8	-9·1	-8·7	-8·1	-8·5	-10·8	-13·1	-18·6	*-23·0*	-19·3	-7·0	+9·5	+24·8	*+32·0*	+30·3	+23·9	+14·8	+8·5	+5·5	+2·0	-2·2	-4·1	-5·1	-5·6
Summer	-11·1	-12·3	-12·3	-12·5	-16·1	-22·9	-28·9	*-31·0*	-27·5	-20·7	-5·7	+11·1	+26·2	+34·5	*+35·7*	+31·9	+25·6	+18·4	+14·1	+9·2	+5·3	+1·4	-4·6	-8·1

VERTICAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+0·8	-0·6	-2·0	-6·0	-9·7	*-10·8*	-10·3	-8·2	-6·1	-4·8	-3·9	-3·8	-3·5	-0·2	+3·5	+7·2	*+10·2*	+9·9	+10·2	+9·2	+7·5	+5·3	+4·1	+2·0
Feb.	+0·2	-1·4	-4·3	-5·1	-5·3	-5·1	-6·0	-6·1	-5·2	-5·4	-7·3	*-8·2*	-5·2	-2·7	+0·9	+4·5	+7·1	*+10·2*	+8·9	+10·1	+9·9	+9·3	+4·9	+1·3
Mar.	-0·8	-1·1	-1·0	-1·4	-2·0	-2·0	-1·8	+0·8	+0·2	-2·8	-6·6	-11·1	*-12·9*	-10·0	-3·5	+2·7	+7·9	*+9·6*	+9·6	+8·2	+7·8	+6·3	+2·8	+1·1
Apr.	0·0	-1·9	-4·4	-4·7	-3·6	-2·3	+0·4	+1·3	-1·3	-5·8	-10·3	-14·6	*-15·7*	-10·9	-3·1	+3·8	+8·7	+12·9	*+13·8*	+12·4	+10·4	+7·6	+4·6	+2·7
May	-12·3	-23·4	-21·4	*-24·2*	-22·0	-16·5	-8·4	-1·2	-1·8	-4·1	-7·8	-10·1	-5·3	+3·6	+13·3	+20·3	+23·1	+25·6	*+27·6*	+24·8	+18·8	+8·7	-7·2	-0·1
June	-13·9	*-18·3*	-15·5	-7·6	-2·9	+0·7	+2·1	+2·3	+1·4	-2·3	-6·7	-11·8	-11·5	-6·6	0·0	+5·8	+11·5	+15·5	*+16·9*	+16·5	+13·8	+9·1	+4·3	-2·8
July	-0·5	-4·0	-5·4	-3·8	-1·6	-1·4	-0·9	-0·8	-2·0	-5·8	-9·7	-14·2	*-15·0*	-10·4	-3·8	+3·0	+9·7	+13·1	*+14·8*	+12·8	+10·6	+8·6	+4·4	+2·3
Aug.	-1·6	-2·8	-2·7	-1·5	+1·3	+2·5	+2·2	+1·6	-1·8	-7·4	-13·7	-17·5	*-18·1*	-11·6	-1·0	+6·9	+12·1	*+14·3*	+12·3	+9·7	+7·7	+5·3	+3·1	+0·7
Sept.	-9·5	-10·8	-11·5	*-12·1*	-8·5	-5·4	-2·8	-1·5	-1·6	-3·2	-6·1	-8·8	-8·1	-3·9	+3·5	+10·4	+17·5	*+18·7*	+18·3	+13·7	+9·0	+5·3	+0·6	-3·2
Oct.	-2·5	-5·8	-6·6	-5·6	-3·6	-2·9	-1·6	+0·7	+0·7	-2·3	-6·8	*-8·7*	-6·7	-2·3	+2·8	+7·8	*+8·9*	+7·4	+6·8	+8·7	+7·1	+4·6	+1·4	-1·5
Nov.	-2·1	-4·6	*-6·6*	-6·1	-5·4	-5·2	-5·7	-4·4	-2·8	-2·7	-4·8	-4·5	-2·3	+0·8	+3·4	+5·1	+6·3	+8·2	+8·0	+9·7	+8·6	+5·3	+2·0	-0·2
Dec.	-6·1	-8·9	-10·0	*-10·4*	-9·8	-9·0	-7·8	-6·5	-4·4	-2·7	-2·1	-1·7	-0·6	+2·3	+8·2	+10·6	+11·5	*+12·3*	+12·1	+9·9	+7·6	+6·9	+1·8	-3·2
Year	-4·0	-7·0	-7·6	-7·4	-6·1	-4·8	-3·4	-1·8	-2·1	-4·1	-7·1	*-9·6*	-8·7	-4·3	+2·0	+7·3	+11·2	+13·1	*+13·3*	+12·1	+9·9	+6·9	+2·2	-0·1
Winter	-1·8	-3·9	-5·7	-6·9	*-7·5*	-7·5	-7·5	-6·3	-4·6	-3·9	-4·5	-4·5	-2·9	+0·1	+4·0	+6·9	+8·8	*+10·1*	+9·8	+9·7	+8·4	+6·7	+3·2	0·0
Equinox	-3·2	-4·9	-5·9	-5·9	-4·4	-3·1	-1·5	+0·3	-0·5	-3·5	-7·5	-10·8	*-10·9*	-6·8	-0·1	+6·2	+10·7	*+12·1*	+12·1	+10·7	+8·6	+5·9	+2·3	-0·2
Summer	-7·1	-12·1	-11·3	-9·3	-6·3	-3·7	-1·1	+0·5	-1·1	-4·9	-9·5	*-13·4*	-12·5	-6·3	+2·1	+9·0	+14·1	+17·1	*+17·9*	+15·9	+12·7	+7·9	+1·1	0·0

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

ALL DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

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DECLINATION (measured positive towards the west)

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	-2·01	-2·25	-2·24	-1·85	-1·78	-0·73	-0·17	-0·30	-0·48	-0·53	+0·02	+1·14	+2·78	+3·61	+3·37	+2·68	+2·25	+1·82	+0·62	-0·25	-0·90	-1·17	-1·82	-1·81
Feb.	-2·28	-1·77	-1·65	-1·06	-1·45	-1·31	-1·32	-1·81	-2·53	-2·56	-1·25	+1·31	+3·60	+4·93	+4·77	+3·81	+2·71	+1·83	+1·29	+0·95	-0·52	-1·06	-2·34	-2·29
Mar.	-1·58	-1·86	-1·42	-1·36	-1·40	-1·85	-2·23	-3·38	-4·56	-4·21	-2·21	+1·22	+4·78	+6·69	+6·68	+5·20	+3·36	+1·54	+0·60	+0·42	-0·36	-1·10	-1·44	-1·53
Apr.	-1·52	-2·31	-2·25	-2·11	-2·70	-3·47	-4·25	-5·64	-5·75	-3·66	-0·59	+3·06	+6·49	+7·93	+7·15	+5·29	+3·43	+1·98	+0·99	+0·09	-0·47	-0·26	-0·60	-0·83
May	-3·02	-3·73	-2·89	-2·57	-2·83	-3·72	-5·24	-5·98	-4·52	-2·54	+0·44	+3·85	+6·26	+7·12	+7·15	+6·19	+4·76	+3·68	+2·47	+1·21	+0·26	-0·75	-2·81	-2·79
June	-2·94	-2·21	-2·96	-2·95	-3·94	-5·14	-5·87	-5·91	-5·35	-3·81	-0·74	+2·67	+5·66	+7·22	+7·29	+6·70	+5·33	+3·90	+2·76	+1·31	+0·51	+0·25	-0·32	-1·46
July	-1·62	-1·80	-2·21	-2·73	-3·41	-5·10	-6·01	-6·11	-5·30	-3·49	-0·67	+2·43	+5·38	+7·09	+7·08	+6·18	+4·60	+3·00	+1·71	+1·09	+0·88	+0·13	-0·31	-0·81
Aug.	-1·68	-1·81	-1·86	-2·41	-3·43	-4·59	-5·79	-5·63	-4·61	-2·49	+0·49	+3·99	+6·94	+8·26	+7·75	+5·64	+3·15	+1·27	+0·65	+0·05	-0·31	-0·45	-1·39	-1·74
Sept.	-2·11	-2·12	-2·14	-2·54	-2·53	-2·93	-3·18	-3·31	-3·45	-2·06	+0·86	+4·15	+6·59	+7·29	+6·21	+4·81	+2·05	+0·90	+0·48	-0·50	-1·30	-1·65	-1·69	-1·83
Oct.	-2·45	-2·18	-2·18	-1·57	-1·58	-1·82	-1·99	-3·18	-3·94	-3·11	-0·11	+3·31	+5·73	+6·63	+5·84	+4·29	+2·70	+1·38	+0·88	-0·05	-1·15	-1·77	-1·90	-1·78
Nov.	-2·23	-1·25	-1·42	-0·93	-0·54	-0·63	-0·29	-0·72	-1·51	-1·43	+0·31	+2·24	+3·85	+4·47	+4·02	+3·41	+2·51	+1·28	+0·53	-0·54	-2·36	-3·10	-2·81	-2·86
Dec.	-2·59	-2·03	-1·21	-0·84	-0·35	+0·07	+0·31	+0·07	-0·23	-0·51	+0·36	+1·66	+2·99	+3·63	+3·14	+2·82	+2·15	+1·31	+0·22	-0·99	-1·38	-2·47	-2·46	-3·67
Year	-2·17	-2·11	-2·04	-1·91	-2·16	-2·60	-3·00	-3·49	-3·52	-2·62	-0·26	+2·59	+5·09	+6·24	+5·87	+4·75	+3·33	+1·99	+1·10	+0·23	-0·59	-1·12	-1·66	-1·95
Winter	-2·28	-1·83	-1·63	-1·17	-1·03	-0·65	-0·37	-0·69	-1·19	-1·26	-0·14	+1·59	+3·31	+4·16	+3·83	+3·18	+2·41	+1·56	+0·67	-0·21	-1·29	-1·95	-2·36	-2·66
Equinox	-1·91	-2·12	-2·00	-1·89	-2·05	-2·52	-2·91	-3·88	-4·43	-3·26	-0·51	+2·93	+5·90	+7·13	+6·47	+4·90	+2·89	+1·45	+0·74	-0·01	-0·82	-1·19	-1·41	-1·49
Summer	-2·31	-2·39	-2·48	-2·67	-3·40	-4·64	-5·73	-5·91	-4·95	-3·33	-0·12	+3·23	+6·06	+7·42	+7·32	+6·18	+4·71	+2·96	+1·90	+0·91	+0·33	-0·21	-1·21	-1·70

INCLINATION

	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	-0·04	+0·27	+0·07	-0·18	-0·56	-0·80	-0·77	-0·63	-0·16	+0·17	+0·32	+0·40	+0·33	+0·33	+0·23	+0·32	+0·29	+0·19	+0·25	+0·16	-0·03	-0·03	-0·08	-0·03
Feb.	-0·15	-0·18	-0·39	-0·42	-0·52	-0·66	-0·82	-0·87	-0·54	+0·09	+0·74	+1·02	+1·00	+0·68	+0·43	+0·23	+0·17	+0·27	-0·12	+0·06	+0·24	+0·06	-0·15	-0·18
Mar.	-0·55	-0·42	-0·36	-0·42	-0·51	-0·63	-0·71	-0·54	-0·04	+0·62	+1·13	+1·29	+1·23	+0·86	+0·57	+0·33	+0·19	-0·01	-0·13	-0·25	-0·30	-0·28	-0·54	-0·53
Apr.	-0·59	-0·49	-0·40	-0·41	-0·57	-0·58	-0·31	+0·06	+0·84	+1·67	+1·89	+1·79	+1·38	+0·81	+0·25	-0·21	-0·45	-0·54	-0·79	-0·83	-0·59	-0·61	-0·60	-0·70
May	+0·01	+0·55	+0·19	-0·62	-0·46	+0·32	+0·52	+1·10	+1·40	+1·70	+1·74	+1·43	+0·80	+0·35	-0·08	-0·75	-1·02	-1·88	-2·35	-2·03	-1·47	-0·68	0·00	+1·23
June	-0·01	+0·19	-0·17	-0·47	-0·36	-0·06	+0·37	+0·87	+1·26	+1·66	+1·94	+1·63	+1·16	+0·54	-0·02	-0·57	-0·87	-1·10	-1·36	-1·46	-1·11	-0·82	-0·72	-0·51
July	-0·38	-0·37	-0·31	-0·34	-0·21	-0·01	+0·33	+0·77	+1·31	+1·63	+1·70	+1·49	+0·97	+0·43	-0·06	-0·50	-0·58	-0·96	-1·19	-1·29	-1·01	-0·61	-0·42	-0·39
Aug.	-0·58	-0·43	-0·34	-0·26	-0·14	-0·03	+0·34	+0·88	+1·36	+1·58	+1·59	+1·25	+0·76	+0·36	+0·09	-0·33	-0·41	-0·67	-0·93	-1·02	-0·95	-0·81	-0·69	-0·63
Sept.	-0·88	-0·81	-0·74	-0·82	-0·83	-0·53	-0·03	+0·36	+0·96	+1·52	+1·81	+1·66	+1·16	+0·81	+0·36	-0·03	-0·13	-0·29	-0·37	-0·65	-0·67	-0·50	-0·68	-0·68
Oct.	-0·52	-0·61	-0·57	-0·64	-0·67	-0·77	-0·58	-0·13	+0·53	+1·18	+1·50	+1·43	+1·14	+0·81	+0·57	+0·36	+0·17	-0·16	-0·40	-0·34	-0·36	-0·54	-0·70	-0·69
Nov.	-0·16	-0·29	-0·45	-0·46	-0·61	-0·82	-0·83	-0·63	-0·20	+0·41	+0·71	+0·92	+0·81	+0·62	+0·40	+0·19	+0·02	+0·02	-0·05	+0·23	+0·35	+0·11	-0·14	-0·15
Dec.	-0·14	-0·27	-0·52	-0·65	-0·75	-0·88	-0·90	-0·76	-0·27	+0·19	+0·55	+0·73	+0·51	+0·36	+0·41	+0·54	+0·28	+0·47	+0·35	+0·26	+0·10	+0·26	+0·06	+0·06
Year	-0·33	-0·24	-0·33	-0·47	-0·52	-0·46	-0·28	+0·04	+0·54	+1·03	+1·30	+1·26	+0·94	+0·58	+0·26	-0·04	-0·19	-0·39	-0·59	-0·60	-0·49	-0·37	-0·39	-0·27
Winter	-0·12	-0·12	-0·32	-0·43	-0·61	-0·79	-0·83	-0·73	-0·29	+0·22	+0·58	+0·76	+0·66	+0·50	+0·37	+0·32	+0·20	+0·24	+0·11	+0·18	+0·16	+0·10	-0·07	-0·07
Equinox	-0·64	-0·59	-0·52	-0·57	-0·65	-0·63	-0·41	-0·07	+0·58	+1·25	+1·58	+1·55	+1·23	+0·82	+0·44	+0·11	-0·05	-0·25	-0·43	-0·52	-0·48	-0·49	-0·63	-0·65
Summer	-0·23	-0·01	-0·16	-0·42	-0·29	+0·05	+0·39	+0·91	+1·33	+1·64	+1·74	+1·45	+0·92	+0·42	-0·02	-0·54	-0·72	-1·15	-1·46	-1·45	-1·14	-0·73	-0·46	-0·07

HORIZONTAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+0·9	-4·3	-1·8	+0·5	+4·8	+8·0	+7·7	+6·5	+0·2	-4·3	-6·2	-7·4	-6·2	-5·1	-2·1	-2·2	-0·6	+0·8	+0·1	+1·0	+3·3	+2·5	+2·7	+1·2
Feb.	+2·4	+2·2	+4·2	+4·4	+5·9	+8·0	+10·1	+10·9	+6·2	-3·4	-13·9	-18·4	-17·0	-11·2	-6·2	-1·8	0·0	-0·2	+5·1	+2·9	+0·1	+2·5	+4·0	+3·2
Mar.	+8·0	+5·9	+5·0	+5·8	+6·9	+8·7	+10·0	+8·5	+0·7	-10·4	-19·4	-23·6	-23·4	-16·7	-9·9	-4·0	+0·1	+3·7	+5·6	+6·9	+7·4	+6·6	+9·2	+8·4
Apr.	+8·9	+6·7	+4·4	+4·5	+7·2	+7·9	+4·8	-0·4	-13·2	-27·3	-32·3	-32·4	-26·6	-16·2	-4·9	+4·6	+10·0	+13·0	+17·1	+17·1	+12·7	+12·0	+10·8	+11·6
May	-4·8	-17·0	-10·8	+0·3	-1·2	-10·9	-10·9	-17·0	-21·7	-27·1	-29·1	-25·3	-14·0	-4·0	+6·1	+18·8	+23·9	+37·8	+45·7	+39·8	+29·2	+13·5	-2·7	-18·6
June	-5·0	-9·7	-3·2	+4·2	+4·3	+1·2	-4·8	-12·3	-18·5	-25·8	-31·7	-28·9	-21·8	-10·6	+0·3	+10·8	+17·4	+22·3	+26·8	+28·2	+21·9	+15·8	+12·4	+6·7
July	+5·5	+4·0	+2·7	+3·7	+2·6	-0·3	-5·3	-11·9	-20·4	-26·7	-29·2	-27·8	-20·2	-10·3	-0·5	+8·7	+12·3	+19·3	+23·5	+24·2	+19·2	+12·3	+7·9	+6·7
Aug.	+8·1	+5·5	+4·1	+3·4	+2·6	+1·4	-4·3	-12·7	-21·2	-26·6	-29·0	-25·4	-18·2	-9·8	-1·7	+7·6	+10·7	+15·4	+18·6	+19·0	+17·1	+14·1	+11·6	+9·7
Sept.	+9·7	+8·2	+6·8	+7·8	+9·4	+6·0	-0·6	-6·0	-15·1	-24·1	-29·5	-28·3	-20·5	-13·6	-4·1	+4·4	+8·4	+11·4	+12·3	+14·9	+13·5	+9·5	+10·4	+9·1
Oct.	+6·9	+7·1	+6·2	+7·5	+8·8	+10·5	+8·2	+2·2	-7·8	-18·6	-25·1	-24·8	-19·7	-13·0	-7·6	-2·5	+0·7	+5·2	+8·5	+8·4	+8·1	+9·9	+11·1	+9·8
Nov.	+1·6	+2·7	+4·4	+4·6	+7·2	+10·4	+10·3	+7·9	+2·0	-7·2	-12·5	-15·5	-13·1	-9·0	-4·7	-0·9	+2·0	+2·8	+3·7	+0·1	-2·1	+0·3	+2·8	+2·2
Dec.	-0·2	+0·8	+4·1	+6·0	+7·6	+9·9	+10·6	+9·0	+2·5	-3·9	-9·0	-11·6	-7·9	-4·6	-3·2	-4·2	0·0	-2·5	-0·8	-0·2	+1·3	-1·3	-0·3	-2·1
Year	+3·5	+1·0	+2·2	+4·4	+5·5	+5·1	+3·0	-1·3	-8·9	-17·1	-22·2	-22·5	-17·4	-10·3	-3·2	+3·3	+7·1	+10·7	+13·9	+13·5	+11·0	+8·1	+6·7	+4·0
Winter	+1·2	+0·3	+2·7	+3·9	+6·4	+9·1	+9·7	+8·6	+2·7	-4·7	-10·4	-13·2	-11·1	-7·5	-4·1	-2·3	+0·3	+0·2	+2·0	+0·9	+0·7	+1·0	+2·3	+1·1
Equinox	+8·4	+7·0	+5·6	+6·4	+8·1	+8·3	+5·6	+1·1	-8·9	-20·1	-26·6	-27·3	-22·5	-14·9	-6·6	+0·6	+4·8	+8·3	+10·9	+11·8	+10·4	+9·5	+10·4	+9·7
Summer	+0·9	-4·3	-1·8	+2·9	+2·1	-2·1	-6·3	-13·5	-20·5	-26·5	-29·7	-26·9	-18·5	-8·7	+1·1	+11·5	+16·1	+23·7	+28·7	+27·8	+21·9	+13·9	+7·3	+1·1

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF GEOMAGNETIC FORCE

INTERNATIONAL QUIET DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

26 ESKDALEMUIR 1967

NORTH COMPONENT

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+0·7	+1·4	+1·7	+2·9	+2·9	+4·4	+5·4	+6·3	+2·4	-5·3	-11·6	-15·2	*-17·1*	-12·7	-6·4	-0·9	+2·2	+4·5	+5·3	+6·1	+5·8	*+7·1*	+5·5	+4·7
Feb.	+3·1	+1·8	+3·3	+3·9	+5·7	+7·5	+8·9	*+9·5*	+6·2	-3·9	-12·8	*-17·0*	-16·6	-11·7	-7·9	-2·4	+2·1	+2·9	+5·0	+2·7	+0·4	+2·3	+3·6	+3·7
Mar.	+5·4	+4·6	+4·3	+4·5	+5·3	+7·3	+8·7	+8·2	+1·4	-9·0	-19·3	*-24·1*	-22·4	-17·4	-9·6	-3·9	-0·5	+1·9	+5·5	+9·1	+10·4	*+11·5*	+9·5	+8·5
Apr.	+8·7	+8·9	+8·3	+7·1	+7·6	+9·4	+7·2	+0·5	-12·5	-27·5	-36·9	*-37·6*	-30·3	-20·1	-5·9	+4·3	+10·3	+12·1	+13·3	+14·6	*+15·4*	+15·1	+13·3	+14·6
May	+8·8	+5·7	+3·1	+3·3	+5·3	+5·8	+4·8	+0·1	-7·1	-16·2	-27·9	-29·7	*-30·5*	-24·1	-14·7	-4·7	+6·8	+18·5	*+22·1*	+17·9	+15·7	+13·7	+12·1	+11·2
June	+4·3	+3·0	+4·7	+5·9	+6·9	+4·4	-1·4	-8·5	-15·5	-23·3	*-25·9*	-25·1	-24·9	-16·6	-7·7	+1·4	+12·0	+16·7	+17·2	*+18·7*	+16·1	+14·7	+12·3	+10·5
July	+4·7	+3·9	+3·7	+4·6	+6·6	+5·1	-0·7	-5·7	-12·9	-20·9	-26·8	*-29·7*	-26·4	-16·1	-7·5	+1·0	+7·7	+13·1	+19·0	*+19·4*	+17·0	+14·7	+13·5	+12·8
Aug.	+6·5	+5·0	+4·9	+6·5	+8·7	+7·5	+2·5	-5·7	-16·3	-26·2	-33·2	*-34·5*	-26·4	-13·9	-1·1	+7·9	+13·5	*+18·1*	+17·5	+13·9	+13·5	+11·1	+11·0	+9·0
Sept.	+7·5	+5·7	+5·5	+6·5	+7·0	+6·5	+5·1	-0·4	-9·2	-16·9	-23·0	*-25·4*	-23·1	-18·1	-10·7	-3·5	+5·1	+8·2	+10·1	+14·4	*+14·4*	+11·5	+11·2	+11·5
Oct.	+8·3	+10·5	+8·4	+7·5	+8·2	+9·9	+8·4	+4·2	-3·8	-14·5	-24·6	*-27·1*	-25·2	-19·4	-12·6	-5·3	+1·5	+5·2	+8·1	+9·2	+9·6	+11·2	*+11·3*	+11·0
Nov.	+0·6	-0·4	+0·2	+1·6	+3·5	+4·7	+6·4	+5·3	+0·9	-5·9	-11·6	*-15·0*	-13·0	-6·9	-3·8	-2·5	+0·4	+3·3	+5·6	*+6·6*	+6·3	+4·9	+4·7	+4·2
Dec.	+0·9	+3·2	+1·1	+0·1	+1·5	+5·6	+7·2	*+7·5*	+3·2	-2·4	-7·1	*-8·5*	-8·3	-5·2	-3·9	-2·8	-0·2	-0·6	+1·3	+0·3	+2·7	+3·6	+1·0	-0·3
Year	+5·0	+4·5	+4·1	+4·6	+5·8	+6·5	+5·2	+1·7	-5·3	-14·3	-21·7	*-24·1*	-22·1	-15·2	-7·7	-0·9	+5·0	+8·6	+10·9	*+11·1*	+10·6	+10·2	+9·1	+8·5
Winter	+1·3	+1·5	+1·6	+2·2	+3·4	+5·5	+7·0	*+7·2*	+3·2	-4·3	-10·7	*-13·9*	-13·8	-9·1	-5·5	-2·1	+1·1	+2·5	+4·3	+3·9	+3·8	+4·4	+3·7	+3·1
Equinox	+7·4	+7·5	+6·6	+6·4	+7·1	+8·3	+7·4	+3·1	-6·1	-17·0	-25·9	*-28·5*	-25·3	-18·7	-9·7	-2·1	+4·1	+6·9	+9·3	+11·8	*+12·4*	+12·4	+11·4	+11·4
Summer	+6·0	+4·4	+4·2	+5·1	+6·8	+5·7	+1·3	-5·1	-12·9	-21·6	-28·5	*-29·8*	-27·1	-17·7	-7·8	+1·6	+9·9	+16·6	*+18·9*	+17·5	+15·6	+13·6	+12·3	+10·9

WEST COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-4·3	-3·5	-2·4	-1·6	-1·3	-1·5	-3·2	-5·9	-9·4	*-11·7*	-9·6	-2·5	+5·6	+12·3	*+12·9*	+10·0	+7·2	+5·3	+4·8	+3·3	+2·3	-1·3	-3·1	-2·4
Feb.	-4·6	-3·3	-2·9	-3·1	-2·8	-3·5	-4·8	-6·4	-11·5	*-15·8*	-11·1	+0·1	+9·5	+14·9	*+15·7*	+13·1	+9·3	+9·2	+8·1	+5·1	+2·0	-3·6	-8·4	-5·4
Mar.	-5·2	-4·7	-5·1	-5·7	-6·2	-7·9	-8·3	-13·7	-21·7	*-22·5*	-15·3	+0·3	+15·5	+23·4	*+24·7*	+18·1	+10·6	+6·3	+7·2	+5·4	+3·2	+2·2	+0·1	-0·7
Apr.	-2·2	-3·8	-5·8	-8·4	-10·6	-13·2	-20·9	-30·4	*-34·2*	-28·9	-14·3	+2·9	+20·1	+29·6	*+30·4*	+24·6	+17·4	+12·2	+9·0	+8·9	+7·2	+4·7	+3·7	+1·7
May	+3·2	+3·4	-3·4	-7·5	-14·1	-20·5	-28·7	*-34·5*	-30·5	-21·1	-7·3	+8·8	+23·6	+31·1	*+31·3*	+23·3	+16·7	+11·5	+6·9	+4·4	+0·4	-0·5	+1·4	+2·2
June	-5·4	-4·4	-5·7	-8·5	-15·0	-21·3	-27·1	-29·5	*-29·6*	-23·8	-10·7	+4·3	+17·9	+25·8	*+26·4*	+25·8	+23·1	+17·6	+13·2	+9·2	+6·9	+5·5	+4·5	+0·6
July	-3·7	-6·5	-6·1	-8·7	-14·5	-23·6	-28·3	*-30·0*	-29·6	-24·8	-10·3	+7·3	+23·2	+33·3	*+33·5*	+26·6	+18·9	+12·8	+9·6	+6·5	+6·1	+5·7	+3·0	-0·4
Aug.	+0·5	-2·1	-4·0	-5·7	-12·7	-23·4	-29·4	*-32·8*	-31·5	-20·6	-2·8	+15·4	+29·9	*+36·0*	+30·0	+18·4	+8·7	+0·9	+1·2	+2·8	+6·7	+6·5	+5·7	+2·1
Sept.	-8·6	-8·4	-7·6	-9·7	-10·9	-12·5	-17·9	*-22·4*	-22·3	-15·9	-6·0	+9·4	+23·6	*+28·4*	+25·9	+19·1	+11·5	+6·0	+3·9	+5·0	+5·1	+2·4	+1·5	+0·4
Oct.	-5·6	-5·1	-4·7	-4·9	-5·8	-6·1	-9·5	-16·3	*-22·6*	-20·1	-6·2	+11·4	+22·0	*+24·4*	+22·5	+16·7	+9·6	+5·5	+2·3	+2·5	+0·4	-2·3	-3·4	-4·4
Nov.	-6·3	-6·4	-4·7	-3·1	-2·2	-3·0	-3·8	-6·4	-10·9	*-13·4*	-5·4	+4·1	+11·3	*+14·6*	+12·6	+10·3	+8·9	+6·3	+4·7	+2·4	+0·2	-2·1	-2·9	-4·9
Dec.	-0·4	-2·8	-2·6	-2·3	-3·3	-2·1	-3·6	-4·1	-5·7	*-6·7*	-4·5	+3·1	+8·2	*+11·7*	+10·6	+6·5	+6·4	+5·7	+4·6	-3·7	-1·7	-4·0	-4·5	-4·7
Year	-3·5	-4·0	-4·6	-5·8	-8·3	-11·6	-15·5	-19·0	*-21·6*	-18·7	-8·6	+5·4	+17·5	*+23·8*	+23·1	+17·3	+12·3	+8·3	+6·3	+4·3	+3·2	+1·1	-0·2	-1·3
Winter	-3·9	-4·0	-3·1	-2·5	-2·4	-2·5	-3·9	-5·7	-9·4	*-11·9*	-7·6	+1·2	+8·7	*+13·4*	+13·0	+10·0	+8·0	+6·7	+5·6	+1·8	+0·7	-2·8	-4·7	-4·4
Equinox	-5·4	-5·5	-5·8	-7·1	-8·4	-10·0	-14·2	-20·7	*-25·2*	-21·8	-10·5	+6·0	+20·3	*+26·4*	+25·9	+19·6	+12·3	+7·5	+5·6	+5·5	+4·0	+1·7	+0·5	-0·8
Summer	-1·4	-2·4	-4·8	-7·6	-14·1	-22·2	-28·4	*-30·5*	-30·3	-22·5	-7·8	+9·0	+23·7	*+31·6*	+30·4	+22·3	+16·8	+10·7	+7·7	+5·7	+5·0	+4·3	+3·6	+1·1

VERTICAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+1·2	+1·1	+0·6	+0·4	+0·6	+0·3	+0·4	+0·2	+0·6	+0·9	-1·2	-2·8	*-4·8*	-3·5	-0·8	*+2·0*	+1·4	+0·7	+0·6	+0·6	+1·0	+0·3	+0·6	-0·4
Feb.	+1·5	+0·7	+0·1	+0·3	+0·1	-0·4	-1·3	-2·1	-1·5	-0·9	-4·1	*-6·7*	-4·3	-4·1	-2·3	+0·9	+2·5	+3·2	+2·1	+3·3	+3·7	*+4·1*	+3·5	+1·7
Mar.	*+5·2*	+4·7	+4·5	+4·8	+3·9	+3·1	+2·0	+3·1	+2·5	-1·4	-6·7	-12·5	*-15·4*	-12·5	-6·7	-0·6	+2·5	+3·7	+3·4	+2·9	+2·5	+2·4	+2·1	+2·5
Apr.	+2·3	+2·9	+3·6	+4·9	+5·3	+5·1	+5·5	+4·7	+1·8	-3·5	-9·5	-13·5	*-15·5*	-12·3	-6·0	-1·7	+2·3	+5·9	*+6·1*	+4·1	+2·8	+1·9	+1·7	+1·1
May	+0·7	-2·8	-1·3	+1·5	+4·7	+5·2	+3·5	+0·9	-2·5	-7·6	-14·5	*-20·5*	-18·7	-12·4	-3·9	+3·3	+7·5	+10·6	*+11·3*	+9·9	+9·7	+7·4	+4·5	+3·5
June	+0·7	+0·7	+0·9	+3·1	+5·5	+5·5	+3·7	+2·5	+0·3	-3·7	-10·3	*-16·1*	-14·5	-8·9	-3·3	+0·5	+3·3	+5·9	*+6·5*	+5·9	+4·1	+3·9	+1·9	+1·9
July	+3·3	+3·6	+3·5	+4·6	+6·4	+7·9	*+8·0*	+5·0	+1·7	-3·8	-9·3	-13·8	*-17·3*	-13·2	-12·9	-7·4	+3·2	+5·9	+7·2	+5·4	+4·5	+2·6	+2·7	+2·2
Aug.	+2·4	+1·9	+2·7	+2·8	+5·1	+7·3	+7·0	+7·7	+3·3	-5·0	-12·9	-20·7	*-23·0*	-15·7	-4·9	+2·4	+6·1	*+9·9*	+8·4	+5·9	+3·3	+2·8	+1·7	+1·5
Sept.	+3·9	+3·2	+2·9	+2·9	+3·7	+5·4	*+6·1*	+4·3	+1·7	-2·4	-6·9	-12·3	*-14·1*	-12·6	-7·9	-1·5	+2·3	+3·8	+3·7	+3·1	+2·5	+3·2	+2·5	+2·5
Oct.	+2·7	+1·6	+0·3	+0·3	+0·7	+0·6	+1·3	+2·7	+2·7	-2·8	-9·5	*-12·3*	-9·1	-3·8	+0·1	*+3·7*	*+3·7*	+3·6	+3·5	+2·7	+3·3	+2·4	+1·1	+0·5
Nov.	*+2·4*	+2·0	+1·4	+0·6	0·0	-0·5	-1·2	-0·8	0·0	-0·8	-4·0	*-4·4*	-2·2	-0·6	+1·0	+1·4	+2·2	+1·5	+0·8	+0·2	+0·2	0·0	0·0	+0·8
Dec.	-1·3	*-3·5*	-3·4	-2·1	-1·7	-1·7	-2·3	-1·7	-0·2	+1·1	+1·9	+0·1	-0·3	-0·3	+0·4	+1·3	+1·3	+0·7	+1·5	+3·3	+1·6	+1·7	+1·5	+2·1
Year	+2·1	+1·5	+1·3	+2·0	+2·9	+3·1	+2·7	+2·2	+0·9	-2·5	-7·3	-11·3	*-11·6*	-8·3	-3·9	+0·4	+3·2	*+4·6*	+4·6	+3·9	+3·3	+2·7	+2·0	+1·7
Winter	+0·9	+0·1	-0·3	-0·2	-0·3	-0·6	-1·1	-1·1	-0·3	+0·1	-1·9	*-3·5*	-2·9	-2·1	-0·4	+1·4	*+1·9*	+1·5	+1·3	*+1·9*	+1·6	+1·5	+1·4	+1·1
Equinox	+3·5	+3·1	+2·8	+3·2	+3·4	+3·5	+3·7	+3·7	+2·2	-2·5	-8·1	-12·7	*-13·5*	-10·3	-5·1	0·0	+2·7	*+4·3*	+4·2	+3·2	+2·8	+2·5	+1·9	+1·7
Summer	+1·8	+0·9	+1·5	+3·0	+5·4	+6·5	+5·5	+4·0	+0·7	-5·0	-11·7	-17·8	*-18·4*	-12·5	-6·3	-0·3	+5·0	+8·1	*+8·3*	+6·8	+5·4	+4·2	+2·7	+2·3

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

DIURNAL INEQUALITIES OF THE GEOMAGNETIC ELEMENTS, DECLINATION, INCLINATION, AND HORIZONTAL COMPONENT

INTERNATIONAL QUIET DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

27 ESKDALEMUIR 1967

DECLINATION (measured positive towards the west)

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	-0·88	-0·75	-0·54	-0·42	-0·36	-0·45	-0·84	-1·40	-1·96	*-2·15*	-1·52	+0·02	+1·72	*+2·91*	+2·80	+2·04	+1·36	+0·91	+0·78	+0·44	+0·26	-0·51	-0·82	-0·64
Feb.	-1·03	-0·73	-0·69	-0·75	-0·75	-0·96	-1·27	-1·61	-2·51	*-3·01*	-1·77	+0·61	+2·47	+3·39	*+3·41*	+2·71	+1·79	+1·74	+1·45	+0·93	+0·39	-0·79	-1·81	-1·21
Mar.	-1·22	-1·09	-1·16	-1·29	-1·43	-1·84	-1·97	-3·01	*-4·38*	-4·17	-2·38	+0·89	+3·88	*+5·27*	+5·26	+3·75	+2·13	+1·18	+1·25	+0·77	+0·28	+0·03	-0·32	-0·43
Apr.	-0·74	-1·06	-1·44	-1·92	-2·38	-2·97	-4·42	-6·08	*-6·40*	-4·82	-1·58	+1·90	+5·08	*+6·62*	+6·28	+4·76	+3·12	+2·01	+1·34	+1·28	+0·90	+0·42	+0·28	-0·18
May	+0·33	+0·49	-0·79	-1·61	-3·01	-4·30	-5·89	*-6·89*	-5·85	-3·65	-0·49	+2·79	+5·77	*+7·05*	+6·77	+4·81	+3·09	+1·66	+0·61	+0·25	-0·47	-0·57	-0·15	+0·05
June	-1·22	-0·99	-1·31	-1·90	-3·23	-4·41	-5·36	*-5·59*	-5·37	-3·94	-1·23	+1·73	+4·44	*+5·73*	+5·55	+5·10	+4·19	+2·93	+2·04	+1·19	+0·83	+0·60	+0·47	-0·25
July	-0·89	-1·43	-1·36	-1·89	-3·13	-4·89	-5·63	*-5·79*	-5·46	-4·23	-1·13	+2·49	+5·55	*+7·21*	+6·94	+5·27	+3·51	+2·11	+1·25	+0·63	+0·62	+0·63	+0·13	-0·51
Aug.	-0·13	-0·60	-0·97	-1·34	-2·84	-4·93	-5·96	*-6·36*	-5·73	-3·20	+0·59	+4·28	+6·89	*+7·68*	+6·03	+3·40	+1·26	-0·45	-0·36	+0·08	+0·87	+0·92	+0·75	+0·12
Sept.	-1·97	-1·88	-1·71	-2·16	-2·42	-2·73	-3·76	*-4·46*	-4·13	-2·58	-0·41	+2·76	+5·51	*+6·30*	+5·55	+3·94	+2·12	+0·91	+0·44	+0·50	+0·51	+0·08	-0·09	-0·32
Oct.	-1·41	-1·39	-1·23	-1·25	-1·45	-1·57	-2·19	-3·41	*-4·37*	-3·51	-0·39	+3·21	+5·27	*+5·55*	+4·93	+3·51	+1·87	+0·91	+0·17	+0·19	-0·25	-0·85	-1·07	-1·27
Nov.	-1·27	-1·27	-0·95	-0·67	-0·57	-0·77	-0·99	-1·47	-2·21	*-2·47*	-0·67	+1·35	+2·71	*+3·15*	+2·65	+2·15	+1·77	+1·15	+0·75	+0·25	-0·17	-0·59	-0·73	-1·13
Dec.	-0·11	-0·67	-0·55	-0·47	-0·71	-0·61	-0·97	-1·09	*-1·25*	*-1·25*	-0·65	+0·91	+1·93	*+2·51*	+2·25	+1·39	+1·29	+1·15	+0·87	-0·75	-0·43	-0·93	-0·93	-0·93
Year	-0·88	-0·95	-1·06	-1·31	-1·86	-2·54	-3·27	-3·85	*-4·13*	-3·25	-0·97	+1·91	+4·27	*+5·28*	+4·87	+3·49	+2·29	+1·35	+0·88	+0·48	+0·28	-0·13	-0·36	-0·56
Winter	-0·82	-0·85	-0·68	-0·58	-0·60	-0·70	-1·02	-1·39	-1·98	*-2·22*	-1·15	+0·72	+2·21	*+2·99*	+2·78	+2·07	+1·55	+1·24	+0·96	+0·22	+0·01	-0·71	-1·07	-0·98
Equinox	-1·33	-1·35	-1·39	-1·65	-1·92	-2·28	-3·09	-4·24	*-4·82*	-3·77	-1·19	+2·19	+4·93	*+5·93*	+5·51	+3·99	+2·31	+1·25	+0·80	+0·69	+0·36	-0·08	-0·30	-0·55
Summer	-0·48	-0·63	-1·11	-1·69	-3·05	-4·63	-5·71	*-5·91*	-5·60	-3·75	-0·57	+2·82	+5·66	*+6·92*	+6·32	+4·39	+3·01	+1·56	+0·89	+0·54	+0·46	+0·39	+0·30	-0·15

INCLINATION

	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	+0·04	-0·03	-0·07	-0·16	-0·16	-0·27	-0·30	-0·34	-0·03	+0·50	+0·84	*+0·95*	+0·94	+0·61	+0·25	0·00	-0·19	-0·33	-0·38	-0·42	-0·38	*-0·45*	-0·31	-0·29
Feb.	-0·12	-0·06	-0·18	-0·21	-0·34	-0·46	-0·56	*-0·60*	-0·31	+0·42	+0·86	*+0·94*	+0·87	+0·50	+0·28	+0·03	-0·18	-0·21	-0·37	-0·15	+0·05	-0·01	-0·05	-0·14
Mar.	-0·16	-0·13	-0·11	-0·11	-0·18	-0·31	-0·42	-0·30	+0·22	+0·81	*+1·27*	+1·27	+0·91	+0·56	+0·18	+0·03	-0·02	-0·11	-0·36	-0·59	-0·65	*-0·72*	-0·57	-0·49
Apr.	-0·49	-0·47	-0·39	-0·24	-0·25	-0·34	-0·10	+0·43	+1·25	+2·05	*+2·34*	+2·09	+1·37	+0·67	-0·11	-0·61	-0·81	-0·78	-0·83	-0·95	*-1·02*	-0·99	-0·87	-0·95
May	0·59	-0·48	-0·20	-0·10	-0·07	-0·02	+0·10	+0·41	+0·75	+1·11	*+1·55*	+1·34	+1·26	+0·92	+0·51	+0·12	-0·45	-1·08	*-1·25*	-0·98	-0·79	-0·71	-0·70	-0·67
June	-0·20	-0·13	-0·22	-0·21	-0·14	+0·09	+0·49	+0·95	+1·35	*+1·70*	+1·56	+1·20	+1·07	+0·58	+0·12	-0·37	-0·97	-1·15	-1·11	*-1·18*	-1·03	-0·93	-0·81	-0·64
July	-0·18	-0·09	-0·09	-0·09	-0·11	+0·13	+0·57	+0·84	+1·22	+1·56	*+1·64*	+1·52	+1·03	+0·35	-0·21	-0·55	-0·64	-0·86	-1·18	*-1·21*	-1·07	-0·97	-0·85	-0·78
Aug.	-0·37	-0·26	-0·21	-0·30	-0·30	-0·05	+0·34	+0·93	+1·50	+1·82	*+1·89*	+1·57	+0·82	+0·12	-0·39	-0·67	-0·83	-0·95	*-0·95*	-0·80	-0·87	-0·73	-0·74	-0·57
Sept.	-0·30	-0·20	-0·20	-0·25	-0·24	-0·15	+0·02	+0·39	+0·90	+1·23	*+1·40*	+1·25	+0·89	+0·55	+0·21	-0·02	-0·41	-0·51	-0·61	-0·92	*-0·94*	-0·71	-0·69	-0·69
Oct.	-0·41	-0·59	-0·49	-0·43	-0·45	-0·56	-0·41	-0·02	+0·58	+1·11	*+1·44*	+1·33	+1·17	+0·89	+0·57	+0·25	-0·11	-0·31	-0·46	-0·56	-0·55	-0·64	*-0·67*	-0·66
Nov.	+0·09	+0·15	+0·07	-0·06	-0·21	-0·28	-0·41	-0·29	+0·07	+0·52	+0·72	*+0·83*	+0·67	+0·27	+0·13	+0·08	-0·07	-0·25	-0·40	*-0·45*	-0·41	-0·30	-0·27	-0·20
Dec.	-0·09	-0·27	-0·12	-0·03	-0·10	-0·39	*-0·49*	-0·49	-0·15	+0·26	*+0·56*	+0·53	+0·44	+0·20	+0·14	+0·15	-0·03	-0·01	-0·10	+0·10	-0·12	-0·15	+0·02	+0·13
Year	-0·23	-0·21	-0·19	-0·18	-0·21	-0·21	-0·10	+0·16	+0·61	+1·09	*+1·34*	+1·23	+0·95	+0·52	+0·14	-0·13	-0·39	-0·54	-0·67	*-0·68*	-0·65	-0·62	-0·54	-0·50
Winter	-0·02	-0·05	-0·07	-0·12	-0·20	-0·35	*-0·44*	-0·43	-0·11	+0·42	+0·74	*+0·81*	+0·73	+0·39	+0·20	+0·06	-0·12	-0·20	-0·31	-0·23	-0·22	-0·22	-0·15	-0·13
Equinox	-0·34	-0·35	-0·30	-0·26	-0·28	-0·35	-0·23	+0·12	+0·74	+1·30	*+1·61*	+1·49	+1·09	+0·67	+0·21	-0·09	-0·34	-0·43	-0·57	-0·76	*-0·79*	-0·77	-0·70	-0·69
Summer	-0·33	-0·24	-0·18	-0·17	-0·15	+0·04	+0·37	+0·78	+1·21	+1·55	*+1·66*	+1·41	+1·05	+0·49	+0·01	-0·37	-0·71	-1·01	*-1·12*	-1·04	-0·94	-0·83	-0·78	-0·67

HORIZONTAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-0·1	+0·8	+1·3	+2·6	+2·6	+4·1	+4·8	+5·2	+0·7	-7·2	-13·1	-15·4	*-15·9*	-10·4	-4·1	+0·8	+3·4	+5·3	+6·0	+6·6	+6·1	*+6·8*	+4·9	+4·2
Feb.	+2·3	+1·2	+2·7	+3·3	+5·1	+6·8	+7·9	*+8·3*	+4·1	-6·6	-14·5	*-16·7*	-14·7	-9·0	-5·1	-0·1	+3·7	+4·4	+6·3	+3·5	+0·7	+1·6	+2·1	+2·7
Mar.	+4·4	+3·7	+3·4	+3·5	+4·1	+5·8	+7·1	+5·7	-2·4	-12·7	-21·6	*-23·7*	-19·4	-13·1	-5·2	-0·7	+1·3	+3·0	+6·7	+9·9	+10·8	*+11·7*	+9·4	+8·3
Apr.	+8·2	+8·1	+7·2	+5·5	+5·7	+7·0	+3·5	-4·7	-18·2	-32·1	*-38·8*	-36·5	-26·4	-14·7	-0·6	+8·5	+13·1	+14·0	+14·7	+15·9	*+16·4*	+15·7	+13·8	+14·7
May	+9·2	+6·2	+2·5	+2·0	+2·8	+2·2	-0·2	-5·8	-12·3	-19·6	*-28·8*	-27·8	-26·0	-18·4	-9·1	-0·6	+9·6	+20·2	*+23·0*	+18·4	+15·5	+13·4	+12·2	+11·4
June	+3·3	+2·2	+3·7	+4·4	+4·2	+0·7	-6·0	-13·4	-20·3	-27·0	*-27·3*	-24·0	-21·5	-12·0	-3·1	+5·8	+15·8	+19·5	+19·2	*+20·0*	+17·1	+15·4	+12·9	+10·4
July	+4·0	+2·7	+2·6	+3·0	+4·0	+0·9	-5·6	-10·8	-17·8	-24·9	*-28·2*	-28·0	-22·0	-10·1	-1·6	+5·6	+10·8	+15·1	*+20·4*	+20·2	+17·8	+15·5	+13·8	+12·6
Aug.	+6·5	+4·6	+4·2	+5·5	+6·4	+3·4	-2·5	-11·2	-21·4	-29·3	*-33·2*	-31·4	-20·9	-7·6	+4·0	+10·9	+14·8	*+18·0*	+17·5	+14·2	+14·4	+12·1	+11·8	+9·2
Sept.	+5·9	+4·2	+4·1	+4·8	+5·0	+4·3	+2·0	-4·2	-12·9	-19·4	*-23·7*	-23·4	-18·7	-13·0	-6·1	-0·2	+7·0	+9·1	+10·6	+15·0	*+15·1*	+11·8	+11·3	+11·4
Oct.	+7·2	+9·5	+7·5	+6·6	+7·1	+8·7	+6·6	+1·3	-7·7	-17·8	*-25·3*	-24·7	-21·0	-14·9	-8·5	-2·4	+3·1	+6·1	+8·4	+9·5	+9·5	*+10·6*	+10·5	+10·1
Nov.	-0·5	-1·5	-0·6	+1·1	+3·1	+4·1	+5·7	+4·1	-1·0	-8·1	-12·3	*-14·1*	-10·9	-4·3	-1·6	-0·7	+1·9	+4·3	+6·3	*+6·9*	+6·2	+4·5	+4·1	+3·3
Dec.	+0·8	+2·7	+0·6	-0·3	+0·9	+5·2	+6·5	*+6·7*	+2·2	-3·5	-7·8	*-7·9*	-6·8	-3·1	-2·0	-1·7	+0·9	+0·4	+2·1	-0·3	+2·4	+2·9	+0·2	-1·1
Year	+4·3	+3·7	+3·3	+3·5	+4·3	+4·4	+2·5	-1·6	-8·9	-17·3	*-22·9*	-22·8	-18·7	-10·9	-3·6	+2·1	+7·1	+9·9	*+11·8*	+11·7	+11·0	+10·2	+8·9	+8·1
Winter	+0·6	+0·8	+1·0	+1·7	+2·9	+5·1	*+6·2*	+6·1	+1·5	-6·3	-11·9	*-13·5*	-12·1	-6·7	-3·2	-0·4	+2·5	+3·6	+5·2	+4·2	+3·9	+3·9	+2·8	+2·3
Equinox	+6·4	+6·4	+5·5	+5·1	+5·5	+6·5	+4·8	-0·5	-10·3	-20·5	*-27·3*	-27·1	-21·4	-13·9	-5·1	+1·3	+6·1	+8·1	+10·1	+12·6	*+12·9*	+12·5	+11·3	+11·1
Summer	+5·7	+3·9	+3·3	+3·7	+4·3	+1·8	-3·6	-10·3	-17·9	-25·2	*-29·4*	-27·8	-22·6	-12·0	-2·5	+5·4	+12·7	+18·2	*+20·0*	+18·2	+16·2	+14·1	+12·7	+10·9

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

DIURNAL INEQUALITIES OF THE GEOGRAPHICAL COMPONENTS OF GEOMAGNETIC FORCE

INTERNATIONAL DISTURBED DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

28 ESKDALEMUIR 1967

NORTH COMPONENT

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+16·1	*-21·3*	-5·5	+0·5	+18·3	*+22·0*	+14·9	+6·2	-6·6	-11·4	-6·3	-5·7	-4·6	-8·1	-2·4	-10·3	-12·4	-1·7	-1·9	+0·6	+12·7	+2·5	+4·2	+0·2
Feb.	+10·5	+6·3	+17·8	+15·8	+14·9	+15·8	+15·2	*+19·2*	+11·0	-3·3	-18·9	-26·9	*-29·4*	-18·3	-10·6	-4·4	-2·4	-12·8	+4·5	-2·6	-11·1	+1·7	+7·8	+0·3
Mar.	+12·5	+11·3	+8·1	+8·0	+10·8	*+15·9*	+14·7	+14·4	+9·6	-2·1	-12·2	-17·8	*-32·2*	-26·2	-22·5	-13·8	-6·0	+8·7	-0·3	-0·3	+0·2	+4·1	+8·0	+7·2
Apr.	+15·6	+13·2	+7·6	+3·0	+6·7	+13·7	+9·4	+5·1	-13·6	-35·4	*-37·5*	-37·5	-34·9	-23·8	-10·8	+6·8	+9·3	+14·8	*+28·6*	+23·8	+9·7	+8·9	+6·9	+10·5
May	-49·2	-114·2	-59·9	-15·1	-15·1	-49·9	-41·5	-41·5	-29·1	-18·2	-13·3	-2·4	+41·3	+63·3	+57·0	+68·3	+71·2	+89·3	*+110·6*	+101·8	+72·7	+9·9	-75·2	*-160·5*
June	-41·1	*-56·7*	-18·8	+18·8	+15·1	+3·5	+2·5	-0·4	-9·3	-20·5	-29·4	-31·1	-22·7	-14·3	-6·0	+8·1	+14·9	+26·9	+43·1	*+55·6*	+38·0	+22·5	+8·0	-6·6
July	+13·8	+8·9	+13·4	+16·7	+11·7	+0·2	-3·1	-9·0	-21·1	*-28·1*	-23·4	-26·7	-25·4	-17·7	-6·1	-0·8	+8·5	+16·2	+23·0	*+27·6*	+18·9	+7·7	-0·9	-4·5
Aug.	+14·3	+8·7	+5·1	+5·1	+5·1	+7·8	+4·5	-7·5	-14·2	-20·7	-26·4	-27·6	*-31·9*	-16·4	-7·4	+0·6	+2·0	+14·4	+20·7	*+21·4*	+17·5	+13·1	+5·2	+6·7
Sept.	+18·2	+20·4	+18·3	+20·4	*+24·9*	+5·6	-9·9	-11·2	-17·6	-26·3	-43·0	*-47·4*	-39·3	-28·5	-11·7	+4·2	+22·6	+22·0	+13·7	+5·0	+12·8	+9·3	+16·3	+21·4
Oct.	+5·5	+6·0	+5·8	+11·0	+13·4	*+18·8*	+14·9	+10·7	+0·3	-13·1	-26·6	*-34·4*	-32·1	-20·8	-10·3	-3·6	-4·6	+2·7	+4·0	+5·9	+14·6	+9·5	+11·3	+11·2
Nov.	+6·2	+7·6	+9·3	+7·9	+10·0	+7·8	*+12·6*	+10·2	+3·5	-7·7	-13·3	*-14·7*	-11·6	-7·9	-5·4	-4·6	+0·5	-6·0	+1·3	-4·1	-11·1	-5·7	+9·7	+5·7
Dec.	+9·7	+14·7	+16·7	*+21·6*	+17·8	+13·7	+9·6	+12·5	+2·6	-7·0	-13·7	*-23·9*	-11·9	-4·5	+4·5	-7·1	-4·2	-6·2	-4·6	-5·4	+0·7	-16·3	-8·6	-10·7
Year	+2·7	-8·0	+1·4	+9·5	+11·2	+6·3	+3·6	+0·7	-7·0	-16·2	-22·0	*-24·6*	-19·6	-10·3	-2·7	+3·6	+8·3	+14·1	*+20·2*	+19·9	+14·6	+5·6	-0·6	-10·7
Winter	+10·6	+1·9	+9·5	+11·5	*+15·2*	+14·8	+13·0	+12·0	+2·7	-7·4	-13·1	*-17·8*	-14·4	-9·7	-3·5	-6·6	-4·6	-6·7	-0·1	-2·9	-2·2	-4·5	+3·3	-1·1
Equinox	+13·0	+12·8	+10·0	+10·6	*+14·0*	+13·5	+7·3	+4·8	-5·3	-19·2	-29·8	-34·3	*-34·6*	-24·9	-13·9	-1·6	+5·3	+12·0	+11·5	+11·1	+9·3	+8·0	+10·6	+10·1
Summer	-15·5	-38·3	-15·0	+6·3	+4·2	-9·6	-9·4	-14·6	-18·4	-21·9	-23·1	-22·0	-9·7	+3·7	+9·4	+19·0	+24·1	+36·7	+49·4	*+51·6*	+36·8	+13·3	-15·8	*-41·2*

WEST COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-15·4	-42·4	*-47·2*	-40·1	-28·9	-1·2	+17·4	+20·1	+14·3	+7·1	+8·6	+13·5	+27·8	*+33·5*	+31·9	+25·2	+19·2	+15·3	+7·4	-0·3	-10·6	-11·0	-21·3	-22·7
Feb.	-5·2	-5·7	-7·6	-5·4	-13·2	-5·7	-4·6	-2·8	-6·3	-4·3	-2·1	+9·5	+16·2	*+29·1*	+28·2	+17·2	+15·8	+8·2	+5·5	+10·4	-12·2	-12·1	*-27·1*	-25·9
Mar.	-6·5	-13·1	-12·9	-5·7	-3·1	-10·0	-12·5	-15·3	-17·7	-15·5	-9·3	+9·7	+24·9	*+37·8*	+35·8	+35·5	+24·7	+8·6	-1·3	+1·3	-8·1	-14·7	*-21·3*	-10·5
Apr.	-15·5	-20·8	-18·5	-17·6	-15·9	-21·3	-27·5	*-35·6*	-32·9	-13·5	+1·7	+19·7	+37·4	*+44·2*	+41·7	+34·9	+26·3	+17·5	+9·0	+3·7	-8·2	-4·3	-4·9	+0·7
May	-66·6	*-83·9*	-46·2	-17·6	+5·9	-1·3	-23·3	-21·3	-6·1	-5·5	+6·0	+23·9	+36·2	+46·4	+51·3	*+58·3*	+48·7	+46·6	+48·5	+35·1	+20·4	-14·2	-68·7	-72·9
June	*-50·0*	-33·3	-40·3	-21·7	-22·6	-28·3	-25·9	-29·2	-26·1	-15·5	+1·0	+12·3	+31·8	+41·7	+45·3	*+46·8*	+40·2	+33·6	+33·6	+22·4	+5·5	+5·7	-3·9	-23·1
July	-11·5	-13·4	-16·5	-18·8	-18·6	-23·0	-25·6	*-27·4*	-19·9	-11·8	-4·4	+10·6	+26·0	+38·4	*+39·0*	+35·6	+30·5	+18·5	+12·4	+12·2	+5·6	-9·7	-17·1	-11·1
Aug.	-9·7	-12·5	-11·2	-13·3	-17·4	-24·0	-35·0	*-35·1*	-31·1	-20·1	-5·0	+16·1	+32·9	+45·5	*+52·7*	+43·1	+24·1	+17·9	+13·7	+1·2	-2·1	-4·0	-16·7	-9·7
Sept.	-11·9	-18·7	-24·0	*-31·3*	-10·6	-7·1	-6·4	+4·4	-4·2	-8·6	+8·8	+22·3	+29·9	*+38·4*	+29·7	+29·5	+9·5	+10·9	+5·3	-5·6	-13·3	-22·2	-15·0	-9·7
Oct.	*-24·2*	-19·3	-19·0	-9·5	-7·0	-1·4	-2·7	-9·2	-16·3	-18·4	+0·6	+16·0	+28·9	*+39·2*	+30·9	+31·5	+21·9	+12·0	+6·2	-0·4	-3·9	-20·8	-17·6	-17·7
Nov.	-15·4	-2·1	-5·9	-1·6	-2·2	+1·9	+11·0	+2·6	-3·3	-5·5	+3·8	+12·8	+19·6	*+26·0*	+24·8	+22·5	+15·3	+0·6	-7·8	-15·7	*-31·3*	-27·3	-13·0	-9·9
Dec.	-18·3	-11·9	-5·0	+4·7	+6·6	+17·0	*+20·0*	+16·1	+11·0	+2·5	+4·3	+7·3	+18·4	+18·5	+11·6	+15·0	+4·7	-3·1	-4·6	-16·4	-10·9	-19·9	-25·6	*-42·0*
Year	-20·9	*-23·1*	-21·2	-14·8	-10·6	-8·8	-9·6	-11·1	-11·5	-9·1	+1·2	+14·5	+27·5	*+36·6*	+35·3	+33·0	+23·4	+15·5	+10·7	+4·0	-5·8	-12·9	-21·0	-21·2
Winter	-13·6	-15·5	-16·4	-10·5	-9·5	+3·0	+10·9	+9·0	+3·9	-0·1	+3·7	+10·7	+20·5	*+26·8*	+24·1	+20·0	+13·7	+5·3	+0·1	-5·5	-16·3	-17·6	-21·7	*-25·1*
Equinox	-14·5	-18·0	*-18·7*	-16·0	-9·2	-10·2	-12·3	-13·9	-17·8	-14·0	+0·5	+17·0	+30·3	*+39·9*	+34·6	+32·9	+20·6	+12·3	+4·7	-0·2	-8·4	-15·5	-14·7	-9·3
Summer	-34·4	*-35·8*	-28·5	-17·8	-13·1	-19·1	-27·4	-28·2	-20·7	-13·2	-0·6	+15·7	+31·7	+43·0	*+47·1*	+45·9	+35·9	+29·1	+27·1	+17·7	+7·3	-5·6	-26·6	-29·2

VERTICAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	-3·1	-3·2	-7·5	-28·5	-50·5	*-52·6*	-46·7	-35·9	-23·1	-12·6	-5·7	-2·1	+3·7	+10·8	+17·9	+30·5	*+44·7*	+35·8	+30·3	+29·3	+22·1	+17·8	+17·7	+10·9
Feb.	-3·8	-5·7	-16·2	-23·0	*-24·0*	-20·9	-18·4	-17·4	-15·4	-14·9	-14·0	-8·2	+4·2	+6·7	+11·8	+9·8	+12·2	+23·7	+19·8	+24·2	+28·4	*+29·9*	+10·6	+0·6
Mar.	-6·9	-9·3	-8·5	-9·5	-12·5	*-13·2*	-9·5	-6·3	-6·5	-8·5	-10·9	-13·1	-10·7	-5·9	+1·1	+6·7	+16·5	*+24·6*	+24·3	+21·5	+21·5	+13·7	+2·5	-1·1
Apr.	-6·0	-11·6	*-22·1*	-20·2	-15·0	-12·6	-4·2	-1·0	-4·3	-9·2	-11·6	-14·4	-15·0	-9·0	+1·1	+10·0	+17·0	+24·6	*+29·4*	+25·0	+23·9	+16·4	+7·6	+1·2
May	-64·2	-106·0	-75·7	-102·0	*-110·0*	-86·8	-41·4	-8·8	-0·9	+9·0	+16·8	+24·2	+44·2	+62·8	+82·5	*+87·0*	+79·0	+78·6	+76·4	+63·4	+39·5	-1·8	-68·6	+2·8
June	*-71·8*	-70·6	-58·4	-21·4	-8·2	+1·9	+7·0	+10·4	+12·4	+12·4	+9·2	+1·8	-1·6	+2·4	+7·2	+12·4	+17·6	+24·1	+27·6	*+31·2*	+31·0	+21·8	+14·4	-12·8
July	-4·4	-14·3	-21·2	-16·3	-12·7	*-16·4*	-14·5	-9·1	-6·8	-9·3	-10·0	-13·9	-13·6	-4·1	+9·2	+16·3	+20·7	*+23·8*	+23·5	+19·7	+20·2	+18·3	+9·0	+5·9
Aug.	-2·3	-5·3	-5·5	-7·3	-4·1	-2·2	-2·9	-4·1	-6·3	-8·9	-14·3	*-18·1*	-17·5	-11·9	+0·3	+11·9	+19·5	*+20·6*	+16·9	+15·1	+13·5	+7·9	+5·3	-0·3
Sept.	-37·0	-50·2	-58·0	*-60·8*	-44·6	-32·8	-21·6	-14·2	-9·0	-1·0	+5·2	+10·0	+15·4	+20·0	+33·8	+43·6	*+56·6*	+41·2	+55·6	+47·4	+18·8	+9·6	-8·8	-19·2
Oct.	-17·8	-20·3	*-24·1*	-18·0	-9·1	-7·5	-5·4	-2·3	-0·7	-2·0	-6·5	-5·3	-2·6	+1·9	+12·3	+19·8	+20·7	+18·3	+18·6	*+27·1*	+12·1	+6·6	-1·7	-14·1
Nov.	-1·3	-6·0	*-15·0*	-14·5	-8·0	-6·4	-10·1	-7·6	-4·2	-3·7	-5·8	-5·6	-4·1	-1·2	+3·8	+7·3	+10·0	*+18·0*	+17·3	+17·8	+12·8	+8·9	-0·2	-2·2
Dec.	-14·8	-18·9	-24·9	-31·8	*-32·3*	-30·1	-24·4	-20·3	-13·9	-8·0	-4·7	+0·5	+4·4	+10·7	+27·9	+31·0	+34·7	*+35·1*	+32·2	+24·7	+18·7	+20·6	+1·1	-17·5
Year	-19·5	-26·8	-28·1	*-29·4*	-27·6	-23·3	-16·0	-9·7	-6·6	-4·7	-4·4	-3·7	+0·6	+6·9	+17·4	+23·9	+29·1	+30·7	*+31·0*	+28·9	+21·9	+14·1	-0·9	-3·8
Winter	-5·7	-8·5	-15·9	-24·5	*-28·7*	-27·5	-24·9	-20·3	-14·1	-9·8	-7·5	-3·9	+2·1	+6·7	+15·3	+19·7	+25·4	*+28·1*	+24·9	+24·0	+20·5	+19·3	+7·3	-2·1
Equinox	-16·9	-22·9	*-28·2*	-27·1	-20·3	-16·5	-10·2	-5·9	-5·1	-5·2	-5·9	-5·7	-3·2	+1·7	+12·1	+20·0	+27·7	+27·2	*+32·0*	+30·3	+19·1	+11·6	-0·1	-8·3
Summer	-35·7	*-49·1*	-40·2	-36·7	-33·7	-25·9	-12·9	-2·9	-0·4	+0·8	+0·4	-1·5	+2·9	+12·3	+24·8	+31·9	+34·2	*+36·8*	+36·1	+32·3	+26·1	+11·5	-10·0	-1·1

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

DIURNAL INEQUALITIES OF THE GEOMAGNETIC ELEMENTS, DECLINATION, INCLINATION, AND HORIZONTAL COMPONENT

INTERNATIONAL DISTURBED DAYS

Departures from the mean of the 24 hourly values (uncorrected for non-cyclic change)

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DECLINATION (measured positive towards the west)

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	-3·64	-7·75	*-9·25*	-8·04	-6·43	-1·01	+2·96	+3·81	+3·09	+1·82	+1·93	+2·89	+5·72	*+6·99*	+6·47	+5·40	+4·27	+3·13	+1·54	-0·09	-2·57	-2·28	-4·41	-4·55
Feb.	-1·41	-1·37	-2·14	-1·63	-3·17	-1·69	-1·45	-1·23	-1·64	-0·75	+0·25	+2·85	+4·27	*+6·47*	+6·02	+3·59	+3·25	+2·09	+0·95	+2·17	-2·06	-2·49	*-5·69*	-5·19
Mar.	-1·74	-3·00	-2·86	-1·42	-1·00	-2·73	-3·00	-3·56	-3·86	-3·02	-1·44	+2·56	+6·10	*+8·46*	+7·94	+7·58	+5·14	+1·41	-0·26	+0·28	-1·62	-3·08	*-4·54*	-2·34
Apr.	-3·64	-4·62	-3·96	-3·62	-3·42	-4·73	-5·82	*-7·28*	-6·10	-1·46	+1·64	+5·24	+8·68	*+9·66*	+8·70	+6·74	+4·92	+2·97	+0·80	-0·10	-1·98	-1·18	-1·22	-0·22
May	-11·64	*-12·84*	-7·18	-3·00	+1·72	+1·48	-3·22	-2·82	-0·20	-0·46	+1·66	+4·88	+5·82	+7·10	+8·30	*+9·32*	+7·30	+6·24	+5·88	+3·50	+1·56	-3·20	-11·16	-9·04
June	*-8·56*	-4·68	-7·39	-4·98	-5·04	-5·78	-5·26	-5·82	-4·89	-2·38	+1·22	+3·54	+7·14	+8·82	*+9·25*	+9·06	+7·52	+5·78	+5·22	+2·54	-0·23	+0·36	-1·06	-4·38
July	-2·78	-2·99	-3·76	-4·34	-4·12	-4·61	-5·00	*-5·16*	-3·24	-1·39	-0·06	+3·04	+6·08	*+8·29*	+8·00	+7·14	+5·80	+3·13	+1·68	+1·48	+0·46	-2·21	-3·38	-2·06
Aug.	-2·43	-2·80	-2·41	-2·84	-3·66	-5·07	*-7·14*	-6·76	-5·73	-3·30	-0·09	+4·18	+7·67	+9·66	*+10·79*	+8·58	+4·74	+3·07	+2·02	-0·50	-1·03	-1·26	-3·51	-2·18
Sept.	-3·00	-4·45	-5·43	*-6·98*	-2·99	-1·61	-0·94	+1·27	-0·23	-0·80	+3·25	+6·11	+7·34	*+8·67*	+6·35	+5·76	+1·11	+1·41	+0·58	-1·63	-3·11	-4·76	-3·57	-2·35
Oct.	*-5·03*	-4·06	-4·01	-2·28	-1·86	-0·93	-1·06	-2·22	-3·27	-3·22	+1·05	+4·40	+6·91	*+8·56*	+6·55	+6·44	+4·54	+2·31	+1·10	-0·28	-1·29	-4·50	-3·91	-3·94
Nov.	-3·29	-0·68	-1·51	-0·59	-0·79	+0·12	+1·77	+0·17	-0·79	-0·84	+1·23	+3·07	+4·33	*+5·48*	+5·15	+4·67	+3·05	+0·32	-1·61	-3·01	*-5·87*	-5·26	-2·93	-2·19
Dec.	-4·00	-2·88	-1·57	+0·20	+0·70	+2·92	+3·66	+2·78	+2·11	+0·74	+1·34	+2·28	*+4·08*	+3·86	+2·17	+3·24	+1·08	-0·40	-0·76	-3·08	-2·21	-3·42	-4·82	*-8·02*
Year	-4·26	*-4·34*	-4·29	-3·29	-2·51	-1·97	-2·04	-2·23	-2·06	-1·25	+1·00	+3·75	+6·18	*+7·67*	+7·14	+6·46	+4·39	+2·62	+1·43	+0·11	-1·66	-2·77	-4·18	-3·87
Winter	-3·09	-3·17	-3·62	-2·51	-2·42	+0·09	+1·73	+1·38	+0·69	+0·24	+1·19	+2·77	+4·60	*+5·70*	+4·95	+4·23	+2·91	+1·29	+0·03	-1·00	-3·18	-3·36	-4·46	*-4·99*
Equinox	-3·35	-4·03	*-4·07*	-3·57	-2·32	-2·50	-2·71	-2·95	-3·37	-2·13	+1·13	+4·58	+7·26	*+8·84*	+7·39	+6·63	+3·93	+2·03	+0·55	-0·43	-2·00	-3·38	-3·31	-2·21
Summer	*-6·35*	-5·83	-5·19	-3·79	-2·77	-3·49	-5·15	-5·14	-3·51	-1·88	+0·68	+3·91	+6·68	+8·47	*+9·09*	+8·53	+6·34	+4·55	+3·70	+1·75	+0·19	-1·58	-4·78	-4·41

INCLINATION

	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
Jan.	-0·95	+1·79	+0·71	-0·28	-2·11	*-2·72*	-2·32	-1·51	-0·30	+0·35	+0·17	+0·17	+0·08	+0·42	+0·23	+1·13	*+1·69*	+0·82	+0·79	+0·69	-0·17	+0·40	+0·40	+0·51
Feb.	-0·72	-0·49	-1·47	-1·53	-1·41	-1·48	-1·40	*-1·65*	-1·03	-0·10	+0·92	+1·45	*+1·84*	+1·03	+0·66	+0·33	+0·27	+1·33	+0·13	+0·65	+1·56	+0·76	+0·06	+0·29
Mar.	-0·91	-0·82	-0·59	-0·69	-0·98	*-1·24*	-1·05	-0·92	-0·59	+0·10	+0·63	+0·73	*+1·55*	+1·14	+1·09	+0·66	+0·52	-0·06	+0·63	+0·54	+0·61	+0·24	-0·22	-0·38
Apr.	-0·99	-0·91	-0·83	-0·49	-0·63	-0·96	-0·40	+0·05	+1·16	+2·24	+2·15	+1·87	+1·48	+0·83	+0·26	-0·60	-0·49	-0·56	*-1·25*	-0·98	+0·05	-0·13	-0·20	-0·67
May	+2·40	+5·83	+2·59	-1·32	-1·78	+1·15	+1·97	+2·74	+1·95	+1·48	+1·22	+0·48	-2·03	-3·13	-2·29	-3·00	-3·28	-4·45	*-5·92*	-5·51	-4·02	-0·53	+4·02	*+11·42*
June	+1·48	*+2·35*	+0·25	-1·51	-0·93	+0·14	+0·31	+0·62	+1·21	+1·82	+2·14	+1·94	+1·09	+0·52	+0·06	-0·76	-1·00	-1·54	-2·52	*-3·12*	-1·78	-1·00	-0·12	+0·37
July	-0·88	-0·79	-1·21	-1·29	-0·87	-0·16	+0·13	+0·67	+1·44	*+1·74*	+1·33	+1·28	+1·03	+0·62	+0·19	+0·05	-0·39	-0·68	-1·07	*-1·46*	-0·80	+0·06	+0·47	+0·56
Aug.	-0·89	-0·56	-0·34	-0·36	-0·24	-0·29	+0·03	+0·78	+1·13	+1·36	*+1·43*	+1·18	+1·29	+0·26	-0·11	-0·23	+0·08	-0·63	*-1·09*	-1·04	-0·79	-0·61	-0·02	-0·33
Sept.	-1·96	-2·36	-2·36	-2·49	*-2·61*	-1·10	+0·18	+0·33	+0·98	+1·79	+2·84	*+3·10*	+2·61	+1·92	+1·27	+0·47	-0·19	-0·54	+0·42	+0·26	-0·22	-0·12	-1·11	-1·12
Oct.	-0·53	-0·67	-0·76	-1·06	-1·02	*-1·40*	-1·08	-0·65	+0·15	+1·01	+1·57	*+1·94*	+1·71	+0·96	+0·63	+0·37	+0·56	+0·14	+0·13	+0·28	-0·61	-0·22	-0·58	-0·88
Nov.	-0·26	-0·62	-0·91	-0·85	-0·83	-0·69	*-1·20*	-0·88	-0·30	+0·47	+0·69	+0·68	+0·44	+0·19	+0·17	+0·23	+0·04	+0·83	+0·43	+0·88	*+1·40*	+0·90	-0·49	-0·31
Dec.	-0·79	-1·30	-1·65	*-2·25*	-2·04	-1·83	-1·46	-1·50	-0·63	+0·23	+0·73	+1·49	+0·68	+0·35	+0·27	+1·06	+1·08	+1·31	+1·15	+1·15	+0·54	*+1·80*	+0·88	+0·74
Year	-0·42	+0·12	-0·55	-1·18	*-1·29*	-0·89	-0·52	-0·16	+0·43	+1·05	+1·32	*+1·36*	+0·98	+0·43	+0·20	-0·02	-0·09	-0·34	-0·67	-0·63	-0·35	+0·13	+0·26	+0·85
Winter	-0·68	-0·16	-0·83	-1·23	-1·59	*-1·68*	-1·59	-1·39	-0·57	+0·24	+0·63	+0·95	+0·76	+0·50	+0·33	+0·69	+0·77	*+1·07*	+0·62	+0·85	+0·83	+0·97	+0·21	+0·31
Equinox	-1·10	-1·20	-1·13	-1·18	*-1·31*	-1·17	-0·59	-0·30	+0·43	+1·29	+1·80	*+1·91*	+1·84	+1·21	+0·81	+0·22	+0·10	-0·25	-0·01	+0·02	-0·04	-0·06	-0·53	-0·76
Summer	+0·53	+1·70	+0·31	-1·12	-0·96	+0·20	+0·60	+1·20	+1·43	+1·60	+1·53	+1·23	+0·34	-0·43	-0·54	-0·98	-1·14	-1·82	-2·65	*-2·78*	-1·85	-0·52	+1·09	*+3·00*

HORIZONTAL COMPONENT

	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	~	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
Jan.	+13·2	*-28·1*	-13·5	-6·4	+13·1	*+21·5*	+17·6	+9·5	-4·1	-10·0	-4·7	-3·3	+0·2	-2·3	+3·1	-5·8	-8·9	+0·9	-0·6	+0·5	+10·7	+0·6	+0·5	-3·7
Feb.	+9·4	+5·2	+16·2	+14·6	+12·4	+14·6	+14·2	*+18·4*	+9·8	-4·0	-19·0	-24·8	*-26·2*	-13·0	-5·6	-1·4	+0·4	-11·2	+5·4	-0·8	-13·0	-0·4	+3·0	-4·2
Mar.	+11·2	+8·9	+5·8	+6·9	+10·1	*+13·8*	+12·3	+11·5	+6·4	-4·7	-13·6	-15·9	*-27·4*	-19·3	-16·0	-7·5	-1·7	+10·0	-0·5	-0·1	-1·2	+1·5	+4·2	+5·3
Apr.	+12·7	+9·4	+4·3	-0·1	+3·9	+9·8	+4·5	-1·1	-19·1	*-37·2*	-36·7	-33·5	-27·9	-15·8	-3·5	+12·7	+13·7	+17·6	*+29·7*	+24·1	+8·1	+8·0	+5·9	+10·5
May	-59·9	-126·9	-66·9	-17·9	-13·9	-49·4	-44·9	-44·5	-29·7	-18·9	-12·1	+1·7	+46·9	+70·3	+64·9	+77·3	+78·5	+96·0	*+117·3*	+106·3	+75·1	+7·3	-85·9	*-170·7*
June	-49·0	*-61·6*	-25·4	+14·8	+11·0	-1·4	-2·0	-5·4	-13·6	-22·8	-28·8	-28·6	-17·0	-7·0	+1·8	+16·0	+21·6	+32·2	+48·2	*+58·6*	+38·4	+23·2	+7·2	-10·4
July	+11·6	+6·5	+10·4	+13·3	+8·4	-3·7	-7·4	-13·5	-24·2	*-29·7*	-23·8	-24·5	-20·6	-10·9	+0·6	+5·3	+13·6	+19·1	+24·8	*+29·3*	+19·6	+5·9	-3·8	-6·3
Aug.	+12·5	+6·4	+3·1	+2·7	+2·1	+3·6	-1·5	-13·3	-19·3	-23·8	*-26·9*	-24·5	-25·9	-8·4	+1·7	+7·9	+6·1	+17·2	*+22·7*	+21·3	+16·9	+12·2	+2·3	+4·9
Sept.	+15·8	+16·9	+13·9	+14·8	+22·7	+4·3	-10·8	-10·3	-18·1	-27·4	-40·9	*-42·9*	-33·6	-21·5	-6·5	+9·2	*+23·9*	+23·5	+14·4	+13·7	+10·3	+5·4	+13·5	+9·7
Oct.	+1·3	+2·6	+2·5	+9·2	+12·0	*+18·3*	+14·2	+9·0	-2·5	-16·0	-26·1	*-31·2*	-26·7	-13·8	-4·9	+1·8	-0·8	+4·7	+5·0	+5·8	+13·7	+5·8	+8·1	+8·0
Nov.	+3·5	+7·1	+8·1	+7·5	+9·5	+8·0	*+14·3*	+10·5	+2·9	-8·5	-12·5	-12·3	-8·1	-3·3	-1·1	-0·7	+3·1	-5·8	-0·1	-6·7	*-16·3*	-10·3	+7·3	+3·9
Dec.	+6·4	+12·5	+15·6	*+22·1*	+18·7	+16·4	+12·9	+15·1	+4·4	-6·5	-12·8	*-22·3*	-8·6	-1·3	+6·4	-4·5	-3·3	-6·6	-5·3	-8·1	-1·2	-19·5	-12·8	-17·7
Year	-0·9	-11·8	-2·2	+6·8	+9·2	+4·7	+1·9	-1·2	-8·9	-17·5	-21·5	*-21·8*	-14·6	-3·9	+3·4	+9·2	+12·2	+16·5	*+21·7*	+20·3	+13·4	+3·3	-4·2	-14·2
Winter	+8·1	-0·8	+6·6	+9·5	+13·4	*+15·1*	+14·7	+13·4	+3·3	-7·3	-12·3	*-15·7*	-10·7	-5·0	+0·7	-3·1	-2·2	-5·7	-0·1	-3·8	-4·9	-7·4	-0·5	-5·4
Equinox	+10·3	+9·5	+6·6	+7·7	+12·2	+11·5	+5·1	+2·3	-8·3	-21·3	-29·3	*-30·9*	-28·9	-17·6	-7·7	+4·1	+8·8	*+13·9*	+12·1	+10·9	+7·7	+5·2	+7·9	+8·4
Summer	-21·2	-43·9	-19·7	+3·2	+1·9	-12·7	-13·9	-19·2	-21·7	-23·8	-22·9	-19·0	-4·1	+11·0	+17·3	+26·6	+29·9	+41·1	+53·3	*+53·9*	+37·5	+12·1	-20·1	*-45·6*

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

RANGE OF MEAN DIURNAL INEQUALITIES FOR THE MONTHS, YEAR AND SEASONS OF 1967

The ranges are derived from the diurnal inequalities printed in Tables 24 to 29

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	All days			Quiet days			Disturbed days			All days			Quiet days			Disturbed days		
	X	*-Y*	*Z*	*X*	*-Y*	*Z*	*X*	*-Y*	*Z*	*D*	*I*	*H*	*D*	*I*	*H*	*D*	*I*	*H*
	γ	γ	γ	γ	γ	γ	γ	γ	γ	′	′	γ	′	′	γ	′	′	γ
Jan.	17·0	28·3	21·0	24·2	24·6	6·8	43·3	80·7	97·3	5·86	1·20	15·4	5·06	1·40	22·7	16·24	4·41	49·6
Feb.	32·1	35·1	18·4	26·5	31·5	10·8	48·6	56·2	53·9	7·49	1·89	29·3	6·42	1·54	25·0	12·16	3·49	44·6
Mar.	38·8	53·0	22·5	35·6	47·2	20·6	48·1	59·1	37·8	11·25	2·00	33·6	9·65	1·99	35·4	13·00	2·79	41·2
Apr.	51·3	65·9	29·5	53·0	64·6	21·6	66·1	79·8	51·5	13·68	2·72	49·5	13·02	3·36	55·2	16·94	3·49	66·9
May	71·9	67·6	51·8	52·6	65·8	31·8	271·1	142·2	197·0	13·13	4·09	74·8	13·94	2·80	51·8	22·16	17·34	288·0
June	57·4	66·3	35·2	44·6	56·0	22·6	112·3	96·8	103·0	13·20	3·40	59·9	11·32	2·88	47·3	17·81	5·47	120·2
July	52·3	66·0	29·8	49·1	63·5	25·3	55·7	66·4	40·2	13·20	2·99	53·4	13·00	2·85	48·6	13·45	3·20	59·0
Aug.	47·7	68·0	32·4	52·6	68·8	32·9	53·3	87·8	38·7	14·05	2·61	48·0	14·04	2·84	51·2	17·93	2·52	49·6
Sept.	46·5	52·4	30·8	39·8	50·8	20·2	72·3	69·7	117·4	10·74	2·69	44·4	10·76	2·34	38·8	15·65	5·71	66·8
Oct.	39·7	50·5	17·6	38·4	47·0	16·0	53·2	63·4	51·2	10·57	2·27	36·2	9·92	2·11	35·9	13·59	3·34	49·5
Nov.	27·9	35·2	16·3	21·6	28·0	6·8	27·3	57·3	33·0	7·57	1·75	25·9	5·62	1·28	21·0	11·35	2·60	30·6
Dec.	23·0	35·1	22·7	16·0	18·4	6·8	45·5	62·0	67·4	7·30	1·63	22·2	3·76	1·05	14·6	12·10	4·05	44·4
Year	37·4	47·2	22·9	35·2	45·4	16·2	44·8	59·7	60·4	9·76	1·90	36·4	9·41	2·02	34·7	12·01	2·65	43·5
Winter	24·2	31·6	17·6	21·1	25·3	5·4	33·0	51·9	56·8	6·82	1·59	22·9	5·21	1·25	19·7	10·69	2·75	30·8
Equinox	41·0	55·0	23·0	40·9	51·6	17·8	48·6	58·6	60·2	11·56	2·23	39·1	10·75	2·40	40·2	12·91	3·22	44·8
Summer	55·9	66·7	31·3	48·7	62·1	26·7	92·8	82·9	85·9	13·33	3·20	58·4	12·83	2·78	49·4	15·44	5·78	99·5

NON-CYCLIC CHANGE

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	All days			Quiet days			Disturbed days		
	H	*D*	*Z*	*H*	*D*	*Z*	*H*	*D*	*Z*
	γ	′	γ	γ	′	γ	γ	′	γ
Jan.	+0·1	−0·02	+0·1	+5·1	+0·43	−1·4	−17·6	−1·67	+11·0
Feb.	+0·2	+0·03	0·0	+0·3	−0·44	+0·8	−17·1	−2·70	+2·0
Mar.	+0·2	0·00	−0·1	+3·6	+0·59	−1·7	−6·5	−1·20	−0·2
Apr.	+0·3	0·00	0·0	+2·9	+0·12	−0·7	−5·9	−2·56	+1·5
May	−1·2	−0·08	+1·0	+1·5	+0·37	+1·1	−18·1	−0·19	+18·4
June	+1·0	−0·13	−0·7	−3·1	+0·26	0·0	−5·3	−0·81	−0·3
July	−0·2	+0·16	+0·3	+6·8	−0·19	−1·9	−18·8	−0·46	+6·3
Aug.	+0·6	−0·16	−0·4	−1·4	−0·07	+0·4	−6·5	−0·22	−3·1
Sept.	−0·1	+0·11	+0·3	+6·4	+1·18	−1·0	−7·2	−0·77	−6·6
Oct.	−0·2	+0·03	+0·3	+3·2	+0·31	−1·8	−4·5	−1·16	−1·3
Nov.	−0·7	−0·34	+0·5	+2·8	−0·08	−1·6	−4·1	+1·16	−2·6
Dec.	−2·2	+0·03	−0·2	−1·4	−0·10	+0·9	−22·5	−2·03	−0·4
Year	−0·2	−0·03	+0·1	+2·2	+0·20	−0·6	−11·2	−1·05	+2·1
Winter	−0·7	−0·07	+0·1	+1·7	−0·05	−0·3	−15·3	−1·31	+2·5
Equinox	+0·1	+0·03	+0·1	+4·0	+0·55	−1·3	−6·0	−1·42	−1·7
Summer	+0·1	−0·05	+0·1	+0·9	+0·09	−0·1	−12·2	−0·42	+5·3

AVERAGE RANGE OF DIURNAL INEQUALITY 1932-53 WITH 1967 AS PERCENTAGE OF THIS

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		All days			International quiet days			International disturbed days		
		H	*D*	*Z*	*H*	*D*	*Z*	*H*	*D*	*Z*
		γ	′	γ	γ	′	γ	γ	′	γ
Year	1932-53	37·8	8·66	28·7	34·4	8·43	13·7	53·9	11·93	82·1
	1967(%)	96	113	80	101	112	118	81	101	74
Winter	1932-53	19·3	6·95	21·2	16·2	4·44	5·9	34·4	11·45	66·5
	1967(%)	119	98	83	122	117	92	90	93	85
Equinox	1932-53	43·1	10·18	37·1	39·7	9·69	14·8	75·4	15·11	108·9
	1967(%)	91	114	62	101	111	120	59	85	55
Summer	1932-53	59·7	11·84	33·9	50·4	11·76	21·9	83·7	13·11	82·4
	1967(%)	98	113	92	98	109	122	119	118	104

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

HARMONIC COMPONENTS OF THE DIURNAL INEQUALITY OF GEOMAGNETIC FORCE

Values of a_n, b_n in the series $\Sigma(a_n \cos 15nt + b_n \sin 15nt)$, t being reckoned in hours from midnight GMT

Longitude of Eskdalemuir Observatory, 3°12′W.

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	North component								West component								Vertical component							
	a_1	b_1	a_2	b_2	a_3	b_3	a_4	b_4	a_1	b_1	a_2	b_2	a_3	b_3	a_4	b_4	a_1	b_1	a_2	b_2	a_3	b_3	a_4	b_4
	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ	γ
ALL DAYS																								
Jan.	+4·5	+2·5	−3·7	−1·7	+0·8	−2·3	+0·5	−0·3	−9·5	−5·9	−1·4	+3·2	+0·7	−2·9	+1·1	+1·2	+1·7	−9·2	−0·4	−0·1	+1·1	+1·7	−0·8	0·0
Feb.	+8·4	+4·8	−6·7	−2·3	+4·1	−0·5	−1·1	+0·8	−8·1	−9·5	−1·5	+7·7	−1·7	−3·5	+0·4	+2·7	+3·3	−7·7	−2·4	−1·2	+0·6	−0·1	−0·7	−0·1
Mar.	+13·7	+3·7	−8·1	−3·2	+4·2	−0·4	−0·4	+0·6	−6·8	−13·4	+1·3	+11·8	−1·9	−6·7	+0·7	+2·5	+4·3	−4·4	−5·2	−1·9	+2·1	+1·4	+1·2	−0·6
Apr.	+18·5	−3·7	−12·2	+0·8	+4·1	−2·0	+0·6	+1·4	−8·3	−19·0	+5·9	+11·9	−3·7	−6·0	+1·8	+0·5	+5·5	−6·5	−6·8	−2·7	+2·9	+0·7	−0·4	+0·2
May	+9·2	−20·3	−17·4	+0·7	−3·4	+1·3	−0·8	+2·2	−14·2	−24·5	+1·2	+10·6	−6·2	−1·8	+0·3	−0·2	−5·1	−19·4	−8·5	−4·6	+3·7	0·0	−0·7	+2·1
June	+14·9	−10·9	−13·7	+0·1	−0·3	−2·5	−0·6	−0·9	−9·5	−26·4	+3·3	+10·6	−3·1	−3·7	−0·1	−0·4	+0·2	−8·8	−9·9	−5·5	+0·7	−1·9	−0·7	−1·7
July	+16·0	−9·3	−10·8	+1·8	+0·5	−0·5	+0·3	+1·4	−7·5	−23·8	+5·6	+11·2	−3·0	−3·1	−0·5	+0·4	+5·4	−6·7	−7·0	−2·6	+2·0	+0·6	−0·2	−0·6
Aug.	+17·3	−8·1	−9·1	+2·0	+1·1	−1·5	+0·8	+0·5	−11·2	−20·0	+8·8	+11·5	−4·5	−3·8	−0·7	+1·3	+5·5	−5·6	−8·9	−0·3	+3·4	−0·1	−0·8	−0·9
Sept.	+18·0	−4·4	−9·5	+2·5	+2·0	−1·5	−0·2	+0·4	−11·8	−13·1	+5·9	+9·7	−3·3	−4·3	+1·5	+1·8	−1·1	−10·7	−7·5	−2·4	+2·4	+0·7	0·0	−0·7
Oct.	+16·0	+0·8	−8·2	−0·4	+2·6	−2·5	+0·3	+0·8	−10·0	−11·8	+2·7	+11·0	−3·7	−5·2	+2·6	+1·5	+0·6	−5·6	−4·3	−1·3	+2·1	−0·8	−1·4	+0·2
Nov.	+7·8	+3·4	−6·3	−0·3	+3·2	−1·3	+0·1	+0·1	−10·9	−4·9	−1·1	+8·1	−0·8	−2·1	+2·0	+1·5	+0·4	−7·1	−2·1	−1·4	+0·3	−0·3	−0·6	+0·3
Dec.	+5·5	+3·9	−4·7	−0·7	+1·1	−1·9	−0·5	+0·9	−10·8	−2·2	−2·8	+5·6	−0·9	−2·1	+0·3	+1·2	−2·3	−10·3	−2·3	−1·8	+0·6	−0·1	−0·7	−0·5
Year	+12·5	−3·1	−9·2	−0·1	+1·7	−1·3	−0·1	+0·7	−9·9	−14·6	+2·3	+9·4	−2·7	−3·8	+0·8	+1·2	+1·5	−8·5	−5·4	−2·1	+1·8	+0·1	−0·7	−0·2
Winter	+6·6	+3·7	−5·4	−1·3	+2·3	−1·5	−0·2	+0·4	−9·8	−5·7	−1·7	+6·1	−0·7	−2·6	+1·0	+1·7	+0·7	−8·6	−1·8	−0·9	+0·6	+0·3	−0·7	−0·1
Equinox	+16·6	−0·9	−9·5	−0·1	+3·3	−1·6	0·0	+0·8	−9·2	−14·4	+3·9	+10·8	−3·1	−5·6	+1·7	+1·6	+2·3	−6·8	−5·9	−2·1	+2·4	+0·5	−0·8	−0·3
Summer	+14·3	−12·1	−12·9	+1·1	−0·6	−0·8	−0·1	+0·8	−10·5	−23·8	+4·6	+11·0	−4·1	−3·1	−0·2	+0·2	+1·5	−10·1	−8·6	−3·3	+2·5	−0·4	−0·6	−0·3
QUIET DAYS																								
Year	+12·7	−2·4	−8·4	+0·2	+2·6	−1·3	−0·2	+0·6	−4·1	−13·3	+4·0	+8·8	−3·0	−3·8	+0·9	+1·4	+4·6	−0·7	−4·4	−0·5	+2·0	+0·3	−0·6	−0·2
Winter	+5·9	+1·5	−5·5	−1·1	+2·5	−0·8	−0·6	+0·9	−3·3	−6·4	−0·7	+5·4	−1·3	−2·5	+1·0	+1·7	+1·3	−1·2	−0·8	−0·3	+0·7	+0·2	−0·5	−0·3
Equinox	+15·7	−1·1	−8·9	+0·4	+3·1	−1·9	−0·5	+1·1	−4·5	−13·7	+4·1	+9·9	−3·7	−5·4	+1·3	+1·7	+5·5	0·0	−4·8	−0·7	+2·5	+0·6	−0·9	−0·1
Summer	+16·4	−7·6	−10·7	+1·2	+2·1	−1·2	+0·4	−0·2	−4·6	−19·8	+8·5	+11·0	−4·0	−3·5	+0·3	+0·9	+7·1	−0·7	−7·7	−0·8	+2·6	+0·2	−0·5	−0·3
DISTURBED DAYS																								
Year	+8·7	−9·0	−13·4	+0·1	−1·4	−1·8	−1·3	+0·7	−20·1	−17·3	−1·5	+8·2	−2·4	−4·9	+1·1	+0·9	−7·7	−25·2	−6·9	−5·3	+1·9	−0·1	−0·9	+0·3
Winter	+7·6	+3·0	−6·0	0·0	+2·0	−4·0	−0·1	+0·3	−18·8	−5·2	−3·2	+4·6	+1·6	−4·8	+1·9	+2·9	−1·5	−24·8	−0·8	−1·8	+1·3	+1·8	−1·5	+0·8
Equinox	+18·9	−1·9	−11·9	+1·0	+4·7	−0·9	0·0	−0·2	−17·8	−17·2	+2·9	+10·0	−1·6	−6·3	+3·1	+0·3	−5·9	−22·9	−9·3	−6·1	+1·7	−0·3	+0·1	+0·2
Summer	−0·3	−28·1	−22·2	−0·8	−10·9	−0·5	−3·8	+2·2	−23·6	−29·4	−4·4	+10·3	−7·1	−3·7	−1·6	−0·4	−15·6	−27·7	−10·7	−8·1	+2·8	−1·6	−1·4	−0·1

HARMONIC COMPONENTS OF THE DIURNAL INEQUALITY OF GEOMAGNETIC FORCE

Values of c_n, α_n in the series $\Sigma c_n \sin(15nt + \alpha_n)$, t being mean local time, reckoned in hours from midnight

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	North component								West component								Vertical component							
	c_1	α_1	c_2	α_2	c_3	α_3	c_4	α_4	c_1	α_1	c_2	α_2	c_3	α_3	c_4	α_4	c_1	α_1	c_2	α_2	c_3	α_3	c_4	α_4
	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°	γ	°
ALL DAYS																								
Jan.	5·1	64	4·1	252	2·4	171	0·6	135	11·1	241	3·5	343	3·0	177	1·6	56	9·3	173	0·4	269	2·0	43	0·8	283
Feb.	9·7	63	7·1	258	4·2	107	1·3	320	12·5	224	7·9	355	3·9	216	2·8	21	8·4	160	2·7	251	0·6	105	0·7	278
Mar.	14·2	78	8·7	255	4·3	105	0·7	338	14·9	210	11·9	13	7·0	205	2·6	29	6·1	139	5·5	256	2·5	65	1·4	258
Apr.	18·8	105	12·2	280	4·6	126	1·5	35	20·7	207	13·3	33	7·1	221	1·9	86	8·5	143	7·3	255	3·0	86	0·4	304
May	22·3	159	17·1	279	3·7	301	2·4	354	28·3	213	10·6	13	6·4	264	0·4	141	2·1	198	9·6	248	3·7	100	2·2	355
June	18·4	129	13·7	277	2·5	196	1·1	229	28·1	203	11·1	24	4·8	230	0·4	212	8·8	182	11·3	247	2·1	169	1·9	215
July	18·5	123	11·0	286	0·7	148	1·4	24	24·9	201	12·5	33	4·3	233	0·7	320	8·6	144	7·5	256	2·1	83	0·6	215
Aug.	19·1	118	9·3	289	1·9	154	0·9	70	22·9	212	14·5	44	5·9	239	1·5	345	7·9	139	8·8	274	3·4	101	1·2	236
Sept.	18·5	107	9·8	291	2·5	137	0·5	344	17·7	225	11·3	38	5·4	227	2·3	54	10·8	189	7·9	258	2·5	84	0·7	196
Oct.	16·0	90	8·2	274	3·6	143	0·9	32	15·5	224	10·5	21	6·4	225	3·0	74	5·6	177	4·5	259	2·3	121	1·4	291
Nov.	8·5	70	6·3	273	3·4	121	0·2	76	12·0	249	8·2	359	2·2	211	2·5	65	7·2	180	2·5	242	0·4	148	0·7	311
Dec.	6·7	58	4·8	268	2·2	160	1·0	343	11·0	262	6·3	340	2·3	213	1·3	25	10·5	196	2·6	249	0·6	104	0·9	247
Year	12·9	107	9·2	276	2·1	137	0·7	5	17·6	217	9·7	20	4·6	225	1·4	47	8·7	173	5·8	255	1·8	95	0·7	268
Winter	7·5	64	5·5	263	2·7	133	0·4	340	11·3	243	6·4	351	2·8	205	1·9	43	8·6	178	2·0	248	0·7	74	0·7	276
Equinox	16·6	96	9·5	276	3·6	126	0·8	16	17·1	216	11·5	26	6·4	219	2·3	60	7·2	164	6·3	257	2·4	88	0·8	265
Summer	18·7	133	12·8	281	1·0	226	0·8	5	26·0	207	12·0	29	5·2	243	0·3	329	10·3	175	9·2	255	2·5	108	0·7	260
QUIET DAYS																								
Year	12·9	104	8·4	278	2·9	126	0·7	354	14·0	200	9·6	31	4·8	228	1·7	45	4·7	101	4·5	269	2·0	91	0·7	261
Winter	6·0	79	5·7	265	2·7	118	1·0	340	7·2	210	5·5	359	2·8	217	1·9	44	1·8	137	0·8	258	0·7	84	0·6	250
Equinox	15·7	97	8·9	279	3·7	130	1·2	351	14·5	201	10·7	29	6·5	224	2·2	50	5·5	93	4·8	269	2·6	86	0·9	276
Summer	18·1	118	10·7	283	2·4	130	0·4	134	20·3	196	13·9	44	5·3	239	0·9	29	7·2	99	7·8	271	2·6	95	0·6	253
DISTURBED DAYS																								
Year	12·5	139	13·4	277	2·3	227	1·5	312	26·5	232	8·4	356	5·5	215	1·4	64	26·3	200	8·8	239	1·9	103	1·0	301
Winter	8·2	71	6·0	276	4·5	163	0·3	357	19·5	258	5·6	331	5·1	171	3·5	45	24·9	187	2·0	211	2·2	45	1·7	312
Equinox	19·0	99	11·9	281	4·7	110	0·2	179	24·7	229	10·4	23	6·5	204	3·1	98	23·7	198	11·1	243	1·7	108	0·2	39
Summer	28·1	184	22·2	274	10·9	277	4·4	312	37·7	222	11·1	343	8·0	252	1·6	268	31·8	213	13·5	239	3·2	130	1·4	281

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

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(a) Disturbances without sudden commencement All times GMT

Serial Number	From		To		Range (γ)			Notes
	Date	Hour	Date	Hour	*H*	*D*	*Z*	
1a	2 May	20	4 May	04	326	201	351	
2a	28 May	10	29 May	16	357	286	282	
3a	20 Sept.	14	22 Sept.	01	311	213	340	
4a	9 Oct.	20	10 Oct.	23	178	179	174	

(b) Disturbances with sudden commencement (ssc) All times GMT

Serial Number	Date	Time of sudden commencement	End of disturbance Date	Hour	With initial reversed stroke *H*	*D*	*Z*	Magnitude of main stroke (γ) *H*	*D*	*Z*	Range of following disturbance (γ) *H*	*D*	*Z*
								γ	γ	γ			
1b	7 Jan.	08 00	8 Jan.	18	No	Yes	No	13	19	6	248	218	225
2b	13 Jan.	12 03	14 Jan.	10	Yes	Yes	No	41	13	3	399	305	246
3b	7 Feb.	16 36	9 Feb.	01	No	No	No	16	13	2	257	205	252
4b	15 Feb.	23 48	16 Feb.	23	No	Yes	No	84	29	11	242	210	112
5b	1 Apr.	08 07	1 Apr.	23	Yes	Yes	Yes	8	26	4		small	
6b	4 Apr.	03 04	4 Apr.	20	No	Yes	No	23	18	5	145	80	46
7b	1 May	19 07	2 May	01	Yes	Yes	Yes	67	18	7		small	
8b	25 May	12 36	27 May	01	Yes	Yes	Yes	75	97	22	1812	916	1070
9b	30 May	14 26	1 June	03	No	No	No	42	20	4	292	166	312
10b	5 June	19 15	6 June	03	No	No	No	83	33	12	1139	268	372
11b	25 June	02 23	26 June	08	Yes	Yes	Yes	21	12	6	297	123	244
12b	26 June	14 59	28 June	04	Yes	Yes	No	33	24	6	157	87	117
13b	13 Sept.	03 45	13 Sept.	24	Yes	Yes	Yes	10	9	3		small	
14b	28 Sept.	05 36	30 Sept.	18	Yes	Yes	?	9	12	?	171	144	184
15b	1 Dec.	18 24	2 Dec.	04	Yes	Yes	?	14	10	?	141	107	121

In the case of an ssc*, that is, an ssc preceded, on at least one component, by one or more small oscillations, timing of the sudden commencement has been made from the main stroke.

(c) Disturbances due to solar flare (sfe) All times GMT

Serial Number	Date	Commencement	Max.	End	Movement (γ) *H*	*D*	*Z*	*K*	*K'*	Notes
1c	30 Mar.	08 56	09 00	09 04	-8	-14	-	2	2	SEA SWF
2c	29 Aug.	13 30	13 34	13 45	-2	-9	-	2	2	SEA SWF

SEA = Sudden enhancement of atmospherics

SWF = Short wave fade-out.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·33 — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	115						350+	360+	360+	240+	215	200	185	225	225	200	225	185	195	215	200	185	185	145	
2	155	225	295+	175	175	135	130	160	155	140	140	275	230	215	315	185	305	340	360	405	390	320	230	180	
3	130	265	255	115	100	165	205	205	205	245	280	275	375	380	350	370	355	470	540+	555+	325	195	140	140	
4	115	105	95	105	260	220	225	220	150	165	165	230					300	445	300	340	245	260	330	230	
5	175	140	155	185	180	200	185	265	230	135	260+	260+	235+	380+	450+	400+	530+	835+	750+	855+	680+	430+	305	230	
6	205	205	220	165	220	230	155	175	135										435+	270	270				
7			150	150	145																				
8		115	155	165	120	70			110								280+				490	395	375	410	
9	300+			205	285	210	155	145	155	155	140	280	300	285	350	700+	845+	970+	1015+	680+	470+	585+			
10		245				435+	210	145	135	140	170	180	215	195	345	465+	385	305	290	410	425	320	210	155	
11	175+	95+	60	95	105	110	120	165	200	170	235	330+	270	275	260	325	355	490+	365	455	165	135	170	260	
12	290+	125	85	165	150	160			200+	220	125+	180	200+	185+	175+	180	200+	55+	70+	120+	135+	75+	90	20	
13		60+	95+	105	110	120	150			125+	110+	140+	175+	200+	195+	165			165	195+	220+	135+	95	180	
14	130+	125		130+	150+	100+	140+	135+	140+	190+	195+	190+	140+	210+	220+	285	245	335							
15				130	225		195	215	235	215	180	250		175		160+					225				
16					150	120	140	150	150	175			280	290		265	275					320	195	140	
17	130	180	160	115	85+	70+	100	125	165	130	115	90+													
18						115	120	120	135	135	95	110+	160	215	225	265+			280						
19						105							205	235	275	290	255+	225+	200+	260+	245+	330	300	220	
20	245	225	180	165	195								260+	310	320	325	340	355	315	285	240				
21																			135+	145	155	170	195	165	
22			135	145	160	110	135	165	165+	130	135+	100+	125+	125+	145+	135	130+	130+	195						
23																		190	270	345					
24		320	325	255	215	220	275	265	415+	445+	455+	640+	280+	290+	215+	200+	300+	270	215	220	145	105			
25		145	120	65+	50+	55+														305	330+	290	205+		
26						215+	215+	225+	175+	170+	275+									395+	570+	395+	315+	200	
27	25+	50+																							
28												95+	125+	165+	185+										
29								140	165	190	170	165			60+										
30									180+	185+		295+	265+			240+		240+	320+	375	445	330+	280+	205+	
31	190+	180+	115+	165+																					
Mean	170 (14)	165 (17)	163 (16)	147 (19)	162 (19)	158 (20)	178 (18)	188 (18)	189 (21)	185 (20)	192 (18)	226 (19)	224 (18)	242 (18)	254 (17)	286 (18)	333 (16)	365 (16)	338 (19)	359 (19)	319 (20)	276 (18)	226 (16)	192 (15)	231
Fair Weather Mean	159 (8)	186 (14)	161 (13)	153 (16)	175 (16)	153 (15)	167 (15)	177 (15)	166 (14)	167 (14)	173 (11)	226 (9)	247 (9)	255 (11)	296 (9)	248 (11)	309 (9)	322 (9)	268 (11)	314 (12)	286 (13)	252 (12)	217 (13)	191 (14)	219

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·35 — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1			85+	95									225+	170+	130+					345	335	230			
2											170+														
3									100+									130+							
4						110		125+	130+	135+	170+		165+						245	290	310	195	190	125	
5	80+	65+	120+	120	85+	110+	95+	150+	205+	195	150	175	160	180	145	145			250	225	130+			135	
6	80			80+	35+	40										120+	160	140							
7		75			65	60	75	80	125	145	160	210	230	190	220	290	250	305	535+	525+	335	295	220	180	
8	200	180	175	145	160	140	155	155	170	255	155	140	230	200	190	215	260	215	245	395	285	305	245	205	
9	240	180	100	85					-5+	120+	155+		145+	145+	170	180	185	145+	210	290+	330+	285	235	225	
10	215	195	175	135	140	145	165	125	110	135	115	130	125	150	215	145	155	140	150	165	140	140	135	155	
11	145	130	100	65+	80+	105	115	125	100	130	100	185	240	270	280	280	245	190	225	270	200	170	175	175	
12	170	150	125	90	190	140	185	170	85	95	235	165	180	250	260	195	210	205	185	245	255	295	215	160	
13	165	180	175	180	205	240	260	285	305	325	285	455+	400	500	415	495	325	280	295	380	415	230	135	95+	
14	130	115	105	115	115	120	130	125	145	175	210	175	195	185	160	180+	165	250+	260	285	290+	270	250	215	
15	200	260	285	300	270+	275+	290	285+	305	290+	310+	350+	410+	405+	385	390	450+	495+	535+	540+	520+	435+	340+	270+	
16	250	260+	150+												150				230	260					
17					180	175	115	230	205			230	265										410+	545+	
18	430	375	300+	420+	290+	260+	205							415+	270+	360+	390+								
19									180+															85+	
20	100+	100+					20+	40+	65+		185+	120+	155+	185+	175+		220	250	355	295	250	165	135+		
21	200+					100+	125	145	120			105+						360+	175	150+	155+	120+	100+	110+	
22							110	120	190	295	350	265	285	230		205	190								
23																						270	250	300	
24	280	235	180	110	155	200						220	215	230	220	220	200	200	280	295	255	195	175	175	
25	165					155							280+	205				135+	190	225+					
26	125+	95+	110+		95+	100					80+	125+				30+	40+		30+			30	25	15+	
27	15	30	35	30	20	25+	25+	15+												155	150	135	140		
28			75+	65+			100													400+					
Mean	177 (18)	164 (16)	143 (16)	136 (15)	139 (15)	139 (18)	136 (16)	145 (15)	149 (17)	191 (12)	189 (15)	203 (15)	230 (17)	244 (16)	226 (15)	230 (15)	230 (15)	229 (15)	259 (17)	302 (19)	272 (16)	221 (17)	199 (17)	186 (17)	197
Fair Weather Mean	192 (14)	175 (12)	145 (10)	128 (11)	137 (9)	133 (13)	156 (13)	156 (10)	169 (11)	194 (9)	195 (9)	189 (10)	230 (11)	235 (11)	234 (12)	251 (11)	227 (13)	214 (9)	255 (14)	295 (14)	255 (12)	214 (15)	200 (14)	207 (13)	199

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·35 — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1									90+																
2														190+	165+	190						75+	65+		
3		40	90	90	70+	55+	45+	50+	85+	120+	345+	90	90	95			185+	220+					135	130	
4	130	130	180	140	110																				
5			310	250	195	185	140	155+	190+	175	245+	205+	150+												
6		205+			90+	105+	80+	80+	100+		260+	125+	85+		150	160									
7								110+		105+	75+	110	105+	70+							260+			170+	
8	145+	130+	120+	110+	125+	110	90+	140+								115+				185	220	135	180	130	
9	115	150	95	70	50																				
10				155													105+	230+		210+	250+	195+			
11	70+	95+	65+	60+	60+								100+											70+	
12														170+	160	190	200	255	300	275	205	245+	185	185	
13	155	130	140	110	110	100	100	110							180	180		200	190+	180+					
14						145	135+	120	115				110+				70+			90	65+	60+	30+	5+	
15									120					165+						155					
16								95	110	100+	130+						125		200	255	230	120	90		
17											105+		75+		100+										
18			95	85	80	85	70+	60	80	90	140	140	155	195	170	180	165	160	195	245	165	150			
19					105	100			90+	105+	115+	125+	130+	140+	165+	165+		150+	230+	170+	155+	165+	165	100	
20	100+	155	85+	60+	120+																	100			
21		85	110	120	105	185+	100+	100	90+	115+	175+	210	175+	95	80+	60+	75+	60+				50+	120	105	
22				80	120	125	115+	170	140	130+	85+	115+	110	95									180	155+	
23		140	130				130+			130+						160+		170	190	265	205+	190	175	160+	
24	80+	100+				145	195																		
25																									
26			120	100	130	125	125	120	135	135+	125+	145+	130+												
27					120+	120+	105+	100+	95+												230	260+	240	220	
28	185	170	255+	215+	275	210	220+	230+		150+	90+					375+			330+	250	235+	175	155+	135+	
29	105+	85+	90+	105+	125	125+	110+	95+						335+			230+	210+	255+						
30	255	275	295	265	180	200	175	165	170			200+					110+	155	205+		200	230	175	160	
31	150	180	155	165	220	140	195	175	160	200+	230+	205+	160+	140+	145+		140	155	120	110	100	125	125	75	
Mean	135 (11)	138 (15)	146 (16)	128 (17)	126 (19)	133 (17)	125 (17)	122 (17)	118 (15)	130 (12)	163 (13)	152 (11)	121 (13)	154 (11)	146 (9)	177 (10)	141 (10)	179 (11)	221 (10)	199 (12)	194 (13)	152 (15)	144 (14)	129 (14)	149
Fair Weather Mean	165 (6)	145 (10)	156 (11)	136 (12)	139 (13)	139 (12)	155 (6)	124 (9)	129 (8)	133 (2)	140 (1)	147 (3)	118 (3)	120 (4)	165 (4)	180 (5)	157 (4)	183 (6)	201 (5)	203 (9)	193 (7)	153 (8)	161 (11)	138 (8)	153

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·39 — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	75	70	70	60	50	45	50	80	130	205	185	140													
2														115+	125	150+	150+				150+				
3		90		110	115+	105+			160			70+									65+				
4				65+	80+	90+	100+	50+	55+	75+				55+	70+	130+	145	150			135	90+			
5				80	90	110	125	115+	140+	115+	140+	130+	90+			280+	235+	225+	240+	250+	240+	160+	130+	110+	
6	90+	80+	65+			115+																			
7															185+						125+			75	
8	55	55	50	55	50	60	40	40																	
9	100					85	100	85+	80+	85+											85+	90+			
10	80+			80+	105+	115+	115+	110+	110+					65+			100	125	145	145	170	175	135	150	
11	115	135	195	85	85	90+	90+	105	90	75	145	80	105	85	105			125	105	115+	125		115	110	
12	105	115	140	150	180	150	140	150	140	120	120+	125+	100+	105+	100	100+	90	105	115+	100+	115	130	110	105	
13	110	115	100	100	85	75	75	90	90	105	175+	85+	105+	85+	70+	120+	90+	100+	120+	90+	140+	130+	165	275+	
14	145	205	200								120	110	135	175	145	155	150	115	190	270	315+	295+	380+	225	
15	160	180	165	195	255	205		95+	95+		105+	170+	115+	130+	145+	115+	135+	155	175	190	135	130	140	145	
16	165	165	175							155	205	250+	215+	200+	220+	340+	320+	395+	360+	370+	345+	310	160	140	
17	95+	75+	75+			140	5+	-5+	130+	115+	135+	160	210	270	260	255	245	225	200	175	155	150	190	190	
18	175	120	140	165	175	130	225	210	205	165	220	180	200	215	190	180+	155	335+	310+	340+					
19											90+										140				
20	125+	105+				90+										250+					225	280	315	270+	
21	365	135	145	135	245+	235+	210	315+	255	235	175+	190+	225+								205	195	220	235	
22	340	205	140	130	125	140	160	215	200	175														150	
23	100	75+	105	80+	65+	95	135	75+			185+	110+	130+	130+	130+	115+	120+	145	145	110	130	175	160	120	
24	105	130	60+																				185	190	
25	175	200	180	350+	255+	220+	235	275	250+	215+	235+	165+	130+	100+	150+	165	150+	145	105	65	110	120	125	95	
26	80	80	60+	60+			245	180	180	195	155	150	205	90+	85+							140	200	280+	
27	215	190	175	185	335+	210+	240+	180	135			130	115+	90+	145	135+	120+	130	125	105	115	160			
28			95	90	70	100	100	155	110	105	275+	430+	385+	220	185	280	295	250+	180	395+	350+	275	200	180	
29	205	195	145	150	160	130	155	135	115	100	135	100+	145+	155	165	185+	140+	175+	210+	195	175+	200	190		
30													135+					160+					170	180	
31																									
Mean	145 (22)	130 (21)	124 (20)	122 (19)	140 (18)	124 (22)	134 (19)	133 (20)	141 (19)	140 (16)	165 (17)	154 (18)	161 (17)	134 (17)	146 (17)	185 (16)	165 (16)	180 (17)	182 (15)	194 (15)	170 (22)	178 (18)	183 (18)	170 (19)	154
Fair Weather Mean	155 (18)	145 (17)	139 (16)	121 (14)	120 (11)	113 (13)	142 (14)	151 (12)	151 (12)	149 (11)	166 (7)	137 (6)	171 (5)	187 (6)	158 (9)	214 (4)	168 (7)	142 (10)	152 (9)	139 (9)	147 (12)	188 (13)	174 (16)	152 (15)	153

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·48 — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	210	165	200+	115+	55+	100+	140+	140+	110+							185+			175+			115	105	190	
2	310	290	385+	250	320+	400+	395+	335	285	305	305+	170+				290+	255+	130	135	140	110	75+			
3	75	65	75+								270+	145+	185+	140+	140+	130+	135	110	105+	160	165	235			
4															220+	230+			200+	200	180	200+	180+	155+	
5	155+	115+	110+	155+	145+	90+	105+	165+	215	225+	180+	250	145+	125+	130	150+					135	180+	195	230	
6	205	195	155	160	155	205	240	375+	425+									130	260+		205+				
7		255+			235		325	395	260+	245+					110+	90	160+	110	115	125	90	75+	55+		
8					160																	290+	355+	245	
9	235	220	175	225	225+	285	270	290	210+	155+			85+				130+	95+	130	120	175	180	190		
10												100+	125+	135+	135	155	160	155							
11					350+			55+																	
12											300			40+			-50+				155	145			
13		60+	70+	120+																		165			
14	120+	185																			115+			135+	
15	85+	40+	70+	20+																					
16																									
17																100+									
18	150	120	65	45+	65	90+	190	200+	160+	160+	285+	160+	165+	160+	160+	165+	145	145	125	155	165	180	200	250	
19																155	120	145	125		160	180	200	250	
20			135+	130+	200+				85+													270+	330+	300+	
21	275+	235	270+	125	160	170	155			180+			95								200+	155+	145+	145+	
22											225+				180										
23							145+		125+	110+	255+	195+	160+							190					
24			55+	160									190+	185+	215+	255+	235+	175+	225	255	290	310	220	135	
25											315+										265+	180	175	190	
26	140	150	135	95	120	195			240+			275+	175	135	140+	130+	135+	130+	135	145	130	135	115	190	
27				80	45	105	195	175	200+	150											290+	375+			
28					35+	35+	45+															65	95	160	
29	145	125			105	160	160+	170	160	140	100+					95	200	150	140	165	140	110	95	80+	
30	70	55	65	55	65	80	135	180	150	145	195+	190+	-	80	85	80	135+	120+	135	180	90	95	115	110	
31	85	75	140	215	305	300	140	140	135	125	120	125	125	115	120	80	130	115	90	90	105	70	95	65+	
Mean	161 (14)	147 (16)	140 (15)	130 (15)	161 (17)	170 (13)	189 (14)	218 (12)	197 (14)	176 (11)	232 (11)	179 (9)	145 (10)	124 (9)	149 (11)	153 (15)	145 (13)	132 (13)	150 (14)	160 (12)	167 (19)	172 (22)	169 (17)	177 (16)	164
Fair Weather Mean	162 (10)	157 (12)	123 (6)	152 (9)	141 (10)	186 (8)	206 (8)	241 (7)	189 (5)	173 (5)	210 (2)	187 (2)	132 (3)	110 (3)	130 (5)	109 (6)	148 (6)	132 (9)	135 (10)	160 (12)	149 (14)	154 (14)	150 (12)	195 (10)	160

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·49 — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	60	70	55	125	90	95	85	75+	75	75	75	70	80+	10+	65+			130	115	135	85+	65+	125	140	
2	150	155							140	135	125+	105+	140+	125	125	140	160	160	185	175	305	230	275		
3																									
4						140			105	110	110	115	110	115	125	120	110	125	155	165	150	145	125	110	
5	120	90	90	70+	75	80	70+	115	130												200	170	110	130	
6	100	90	95	90+				45+															140+	185	
7	170	140+			130+	170+	185+	170+	170+	180+						215+	205+		220+	175+					
8				85+	120+	160	180	215+	180+	165+	160+	150+	135+	125+	130+	130+	140+	145+	130+	160	230	250	195	115	
9	185	165	155	130	120	140	115+	75	70	80+	200+	75+	70+	85+	75+	135+	90+	80+		180+	205	225	210	170	
10	160	220	205	135	105	110	120	130	105+	85+	175+	105+	110+	105+	105+	120+	125	135	150	120	75+	120	70	60	
11	45	50	130	40	40	45	55+	70	50	55	100	70	95	100	110	140	150	200	270	225	155	155	150	115	
12	125	105	85	80	80	95	95	105	130	125	145	175	195	145	140	140	120	125	130	150	140	85	95	75	
13	70	70	70	65	65	70	85	75	100	145	150	125	105+	110	105	90+	85+	95+	90	100	100	125	130	95	
14	100	100	115	80	100	110	150	135	140	135	95	95	100	100	105	110	120	125	130	135	115	100	70	70	
15	55+	50+	55+	65+	75	115	120	90	55	95	95	75+	85+	85+	95	135	150	145	170	105	70	100	105	135	
16	120					155	135	150	150	140	140	135	120	115	125	120	145	140	110	130	135	215	300	270	
17	265+	275+						85	95+	100+	95+	95	100	100	115	125	125	125	150	150	125	115	100	105	
18	60+	55+	60+	50+	70+	60+	60+	60	70	65+	90+	65+	60+	55+	60+	75+	70+	65+	105+	130	110	65+	60+	60+	
19	65+	105	175+		115	95	110	150	115	130			140	85+	70+	105+	120+	130+	140+		60+	80+	30+	40+	
20		30+	80+														140+	165+	165+	150+	95+		40+		
21		20+	55+							120+	135+	140	140+	180+											
22		65+	110+		130	130	135	105+	115+	125	180	140+	135+								185+	230+	275+	305+	
23	200+	110+	105+	145+	175	205+	315+	265+	170+	165+	190+	220+	180	175+	155	160+	140+	145+	140	105	130	195+	180	115	
24	110	100	110	115	185		230+						120	100	105	55+	135	105	95	125	160				
25			145	345+	375+	195	175	195			110+	140	105	85+	85	95+	50+	155+	185+	225	275	245+			
26							155+	90+	145+	125+	115+	130+	145+	125+				100+	75+			130	125	110	
27	110	105	130	145	130	200+	165	130	95+	150+	190+			125+	75+	110	110+	115+	200	275+	205	315+	250+	130	
28	110	170	190	200	190+																				
29	130		100			140+						100+		115+		85+	115	115	140	140	120	50+	35+	110	
30	115	105	80+	40+	30+	15+	20+	25+	25+	25+		65+	40+	35+	40+	65+	85	100	40+	20+	10+	10+	15+	60+	
Mean	119 (22)	106 (23)	109 (22)	111 (18)	120 (20)	120 (21)	131 (21)	116 (22)	110 (22)	115 (22)	134 (20)	114 (21)	114 (22)	104 (23)	101 (20)	118 (21)	122 (22)	127 (23)	143 (23)	149 (22)	143 (24)	149 (23)	134 (24)	123 (22)	122
Fair Weather Mean	116 (17)	113 (15)	120 (14)	111 (10)	114 (13)	124 (14)	130 (12)	112 (14)	102 (13)	115 (11)	121 (9)	116 (10)	127 (10)	112 (9)	116 (12)	127 (9)	128 (12)	133 (13)	149 (15)	146 (17)	163 (18)	155 (14)	148 (16)	124 (18)	126

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·46 — JULY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	35+	0+	110+	5+	10+	10+	25+	45+	100+	170	195	230	230	205	270+	300+	175+	160+	145+	110+	15+	10+	5+		
2						95+	120+	115+						165+	140+	135+	105+					305+		390+	
3		210	195+	110+	140+	100+	80+	110+						120+	165+										
4		150	135+	95	120	155+			150+	85+	110+	80+			140+	130+	45+	65+	95+	155	175+	215+	180+	210	
5	165	140	120	90	115	100	75+	90+	130+	140+	130+	120+	120+	120+	105+	140+	165+	150	125	140	185				
6	140	100	95	55+	90+	55+	35+								35+		95+	95	65+			35+	25+	25+	
7	30+	20+	15+	15+	15+				25+				180+	130+	110+	120+	150	150							
8			310+	200+	110	65+	40+	30+	20+			25+	45+	65+	60+			-	-		-	-	-	-	
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			160	65+	50+					
10					110+	195	185	100+			115+	90+		105+	200+		165	200	220+	165	155+	95+	165+	150	
11	115+	50+	75	75+	55+	115+	115+	115	140	140	220	205	205	200	195	205	190	220	235	275	395	385	330	245	
12	235	225	175	160	175	215	145	240	250	170	230	155	145+	95+	100+			110+	60+					-30+	
13	205+										145	60+	45+	100	140+	135+	145	165	240	220	210	220	165	150	
14	95	60	65																						
15											175+	100+	60+	110+	115+	95+				125	110	105+			
16										115+								220+	80+	95+	195+	155	265		
17								425+										195	160						
18																255	255+	265+	210+	220	215	315+	390+	195	
19	100+	110+						265+	195+	175+	195	240+			135+	45+								315+	
20	140+	155	170	180	185	160+	235+	240	225					155+		150+	140	145	150	130	130	150	170	115	
21	110		95	60	60	90	110	115	120	140			150+				115	135	120	125	160	145	235	220	
22	180	140	125	100	95	170	175	130	110	105+	160+	115+	105+	110+	105+	125	150	170	175	245+	170	170	125	125	
23	140	120	90	70	70+	80+	120+	95	115+	125+	120+	120+	115	110	105	115+	130+	130+	145	125	115	95+	80+	100+	
24	110+	90+	50+	70	85	90	60+						95+	35+	20+						165+	130	115	155	
25	140	85	105	115	130+	165	165	160	150+	135+	220+	175+	185+	160+	180										
26																									
27					210	170	185+	210	210	150+	195+	160+	200+	175+	115+	130+	120			195+					
28	350	295	245+	205	210	255	285	255+	155+		240+											255+	390+	415+	
29	350+	300+	150							200+															
30																									
31				260	170	205	230+	170+	155+	175+	180+	240+	155+	135+	135	135+	115+	140	200	70+	105+				
Mean	155	132	129	110	113	131	133	162	141	145	175	141	136	127	129	148	141	160	146	153	167	174	188	185	147
	(17)	(17)	(18)	(17)	(19)	(19)	(18)	(18)	(16)	(14)	(15)	(15)	(15)	(18)	(20)	(15)	(16)	(18)	(17)	(16)	(15)	(16)	(14)	(15)	
Fair Weather Mean	173	153	115	128	140	165	177	163	176	155	197	177	183	154	154	195	162	160	173	168	188	194	201	174	168
	(9)	(11)	(11)	(11)	(11)	(10)	(6)	(8)	(6)	(4)	(5)	(3)	(3)	(4)	(4)	(3)	(8)	(12)	(9)	(10)	(9)	(7)	(7)	(9)	

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·48 — AUGUST 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1												360+	180+	125+	155+	120+	120+	130	225	175	140	185	140	130	
2	190	155	100	210	210	170	295+	305+	215	200	220+	200+	190+	175+	190	215	200	205	205	210	170	275	285	255	
3	240	420+	320+	265+	295+	210+	250+	170+	150+								85+	110+	125+	135	175	210	270		
4				350+	465+	385+	175+	105+	60+	385+				130+	205+				535+			110+	165	185	
5	195	150	175	120	95+	140+	235+	175	235	190+	180+			105+	125+	130	175	180	135	110	180	150			
6	145						210					200+	160+	130+	140+	120		180	205	140	110	170	210	170	
7	225	165	160	140	155	170	165	115	140	190	220	220	175	150	155+	165+	130	135	150	160	260	345	325+	105	
8	100	125	205	125	100	80	75	50+						130	145										
9																160	260+	275	210	115	120	165	145	185	
10	150	100	65+	40+	35+	60+	75	115	165	205	150	125+	110+	140+	115	125+	120+	135	160	210	265	180	240	215	
11	180	155	85+												115+					120+					
12		45+			195	85	90+	280+	120	115+	145+	135	115	150+	255+				215		215+			215	
13	220	205	175	150	150	105	175	190+	70+	125+	150+	135+	135+			135+			120+	265+	280+	175+	145+	260	
14	245	235	220	195	280+																		140	180	
15	290+		280+	370+	270+	280+	210+										145+	145+	250+	340	280	290	340+	255	
16	365+													270+						155	210	270	205+		
17		155		140+	90+	135+	170+	155+	115+	105+		90+	150+	160+	135+								215+		
18																									
19				95	120	125	170	165	135	125	135	350	125	115	115	110	135	125	140	145	220	220	185	140	
20	140	110	125	135	120	85	85	85	115	150	155	155	180	175	235	175	210	205	205	265+	265	170	250	270+	
21									130	135	175	165	205	235	235	225	170	170	195	160	180	140	95	75	
22	80+	65+	75+	75+	80	90	105	165	180	170	115	90	150	165	170	170	150	140	165	225	110+	20+	15+	175	
23	130						315+	295	260	215	175	155+	125+	115+	130	135	125	165	150	195	175	115+	160	165	
24											135	150	140	135	115	100	95	125	130	60+	25+	5+	20+		
25		45+	30+	15+	15+		35+	45+	35+	20+	50+	80+	80+	120+	135+	150+					285	285	285	275+	
26	70+	80+											135+	125+					210+	290+	425+	230+			
27				260+	205	220	270+	340+	205+	105	100	100+	100+	105	110	120	135+							80+	
28	150	185						265	255+	190+	180+	150+	135+					205	220	170	255	455	295	180	
29			70	115		65+	50+							135+	140+	185+	165	130	105	85+	40+	35+	45+	70+	
30	15+	0+	0+	0+	0+	0+	10+	10+												55+	115+	65+	15+		
31	10+	50+	120+	90+	40+	75+	45+	70+	115+	110+	100+	190+	205	165+	185	180	195	175	170	40+	5+	5+	0+	0+	
Mean	165	136	138	152	154	138	153	163	150	161	149	169	147	147	157	151	154	163	192	166	188	178	175	171	159
	(19)	(18)	(16)	(19)	(19)	(17)	(21)	(19)	(18)	(17)	(16)	(18)	(19)	(22)	(21)	(18)	(17)	(18)	(22)	(23)	(24)	(24)	(24)	(21)	
Fair Weather Mean	178	162	155	143	148	141	133	116	143	166	151	152	167	156	159	153	162	167	176	176	205	230	205	181	163
	(13)	(11)	(9)	(9)	(9)	(9)	(8)	(7)	(10)	(9)	(9)	(6)	(7)	(7)	(11)	(12)	(10)	(16)	(17)	(15)	(16)	(15)	(14)	(16)	

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·53 — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	-	-	-	-	-	-	-	-	-	-	-	175	205	235	255	185	145								
2							100										145	140	140+						
3								215+	175		70+	120+													
4						195				145+	145+			80+		140	110	145			195+	215			
5																	140+					135	160	110	
6	115+	65+			95+				105+	155+	105+	125+	110	115	160	110+			160	165	145	145	55+	-15+	
7	-10+	30+	-80+	10+	90+	75+	90	130	115	120	110	175	155	150+	140+	140	115	105			115+	185	260	230	
8	170	155	180	270				170	230	205	240	170	150+	130+	150+	130	160	195	215	270	190	175	140	95+	
9	90	95	70	90	70+							185+	120	120+	155	145+	205	230	310	290	320	295	160	100	
10	60+	40+	145	100+	25+	75+				190+	145+	90+			205+	195+	145	130+	125						
11																					205	280	230	250	
12					280	235	340+	455+	415+	350+	210+	180+	160+	160+	170	165	160	165	200	190	240				
13									235	225	155	195	210	195	185	160	130	120	155	150	170	130	120	190	
14	205	205	240	175	160	160	135	185	170	225	180	145	110	110	115	125	150	245	330	470	435	290+	240	55+	
15	195+	225+	240	180	140	155	190	220	35+	50+	70	45	80	115	140	150	175	140	95+	160	225	230	210	235	
16	240+	135	155	160	65+			145	165	190	200	175	175	170	135	120	110	125	160	135	65+	20+	55+		
17			35+	90+	45+	55+	75+	125	145+	80+	65+	60+	90+	90	105	95	95+	110	110+	155+	170	180	155	120	
18	85+	105+	60+	130+		45+	45+	135	60+	55+				195	225	145	115	85	110	100	145	90+	65+	55+	
19	90	100	145	185	165	150	130								230+			200+	255+	245+	240+				
20		140+									125	90+				120	140	165	45+	145	170	120	95+	60+	
21	65+	80+	70+	85+			35+					115	150	120+			185+	140	145	95	150	160	195		
22		100	170+			40+	45+	80	115	120	95+			125	130	120	50+	20+		45+	135	190	265	160	
23	90	75	35+	175+			355	280	265	275	240	210	235	230	170	145+		65+	120+				100	110	
24						25+					140+	245+										180	115+		
25		95+		35+	55+										130+		145	115	95+	200	415+	315+	250+	165	
26	130	135	165+	220+														250+	190+	255+	230	195+	205+	170+	
27	125	135+							330+					250+	230+		160	165	145	185			190	225	
28	230+		195	265	325			450	405	340	345	265	255								215	140	170	150	
29				380	345	245				265	260	230										310	255		
30			215	280																	90+	55+	55+	70+	
Mean	125 (15)	113 (17)	127 (16)	166 (17)	143 (13)	156 (12)	179 (11)	216 (12)	198 (15)	187 (16)	161 (18)	158 (19)	157 (14)	152 (17)	168 (18)	141 (17)	139 (20)	145 (21)	163 (19)	191 (17)	203 (21)	183 (22)	163 (23)	133 (19)	161
Fair Weather Mean	129 (7)	125 (8)	176 (9)	221 (9)	236 (6)	190 (6)	166 (6)	192 (10)	208 (9)	218 (9)	193 (10)	173 (11)	164 (11)	158 (10)	162 (12)	138 (13)	144 (16)	149 (16)	187 (11)	197 (13)	210 (15)	192 (16)	190 (15)	170 (12)	179

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·49 — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1																								310+	
2	270	205	230	280	260	185+	190	195					200+					200	185	105+					
3					125	135									130+										
4	150	180	280	300	305	235			145	200	205	170	190	190	220	190+	225+	405+	235+	215	210	160	140	190	
5	140	145	195	135	140	120	115	120	135	145+	120+	145+	155+	180+	220	180	240	325+	230	330	215	265	250	160	
6																									
7				230	155	170	195	170	150	135	140	130	130	130	195	200	175+	265	320						
8				75+	80+	95			135	150	145+	135+	125	150	195	185	195	90+	45+						
9																					265+	210	185	155	
10	165+	130+	150+	120+	75+	25+		155	120	150	100+	140+	130+	120+	190	160	100+	80+	65+	65+	80	75	60+	65+	
11	55+							205+	155+											50+	335	255	245	180	
12	175	190	170	185	160	140	155	165	190	195	190	150	150	135								405	310		
13			215+			165			210	215+	195	255+													
14										155+					170	145+	160	155							
15												125+	185+	150+			60+						115	120	
16	95	110+	90+	105	115	110	75	100+	115	140	90	145	135	190	260	180	125								
17										185	145									165	150	140	120	95	
18	90	85	90	80	95	115	105+	105	105	110	225	210+	190+			155	170								
19															200+				235	210	230	185+	145	140+	
20										180+	110+		165+	155+		135+			85+					190+	
21	150+	140	150	145	120+	140+	160+	165+		140+	190+	150+	155	115	100+			200+	155+	165+	230+	310	290	195	
22	130	115	160	100	95	85	90	115	105+	125+	130+	115+	125+	195+	125+	100	105		185		110+				
23				85							70+	75+	90+	100	115+	95+		170	185	175	230+	260	160+	140	
24	115+	125	120	120+	95+	155	130+	35+	-	-	-	-	-			240+	245	310	280	275	200				
25														110+		130+	480+		295						
26															140+	65+	185	175+			195+	160	105	105	
27	105	95+					160+										115	260	295	380+			240	130	
28	170	240	300	365	290	275	330	300	245	190	215	140	190	235	235		230	255	285	395	405	375	345	225	
29	200	155	120	135	140	125	125	155	140	135	170	170	180	160	195+	300+	365+	270	220	250	290	315	330	220	
30	220	165	115	105	115	195	175					245+				185+	290+								
31						260+	460+	540+	360+	290+				160	245	200	195	170+	250	345+	330	340	280	310	
Mean	149 (15)	149 (14)	170 (14)	160 (16)	148 (16)	152 (18)	176 (14)	180 (14)	165 (14)	167 (17)	153 (16)	156 (16)	156 (16)	155 (16)	183 (16)	167 (17)	203 (18)	222 (15)	209 (17)	223 (14)	232 (15)	247 (14)	207 (16)	172 (17)	179
Fair Weather Mean	159 (11)	159 (11)	175 (11)	173 (13)	166 (12)	151 (14)	155 (10)	172 (8)	154 (11)	159 (10)	175 (9)	151 (6)	157 (8)	157 (10)	214 (9)	170 (8)	179 (11)	236 (8)	247 (12)	252 (8)	245 (10)	252 (13)	221 (14)	171 (13)	185

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·38 — NOVEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	290	320	320	300+	315	305	305	360+	385+	335+	375+	170	205	315											
2							260+	250	320+	210												120	165	125	
3			190	175	120	140	225	295+	225	220	205			120+	145+	145+	170	210							
4								125	140	150	60	95	105		115	110	100	205	185		165		145	175+	
5	175+	165+				80	65+	80	85	85	105					85+	90	120	145	240	335	230	155	230	
6	245	165	155	120	95	95	85	50+	85				120	155	180	175	165	135	200	185	315	200		255+	
7	265	255	145									175+	125	140	160	210+	220+	170	120	135	195	290	230	195	
8	80+	135	170	155	245	305	440	395	385	270			100	110	115+	105	105	120	–	–	–	130+			
9											130	140	125	130			210	185	275	235	320		200	205	
10	175	140	90	90	125+		70+	135	320+	250															
11																	135	130				130+	155		
12		120		145			140	125	105	125	105	135	160	175	195	150	135	305+	240	330	220				
13																									
14	175+	150+	125+	125	115	105+	100+																		
15						180+	160+	150+	125+				165	155	285+				170			155	120	125	
16	120	100	90	95	90	90	90	55	65	90	150	170	250	250	250	255	350+	220	455+	430+	340+	570+	340+	315+	
17	280+	365+	245	240	220	160	180	280	280	345	285+	185	235	365+	100+	140	165	240	310	365	350	265	170	200	
18	165	190	285+	225	180	200	230	205															155	125	
19	140	135	110	115	105	125	120	130	135	165	180	190	180	160	165	195	235	230	290	270	300	235	245	235	
20	220	120	140	150	135	135	150	130	145	120+	195+											145	105	70	
21	70+	80	65	45+	30+	45+		45	50	50	50+	–	–	–	–	–	155								
22																									
23																									
24																									
25										240	215	245	230	305	235	210	275	340+	245	150	180	170	150	145	
26	90	125	155	150	110	95	125	135	150	105	140	185	140	190	210	180	180	235	250	265	190				
27																									
28						165	190			175			175+	165+			220+								
29	125+	165					200	185	150	190	150	145	175+	230	260	220	250	180			250	325	355	240	
30													325+	35	40	35									
Mean	174	171	163	152	145	148	174	174	185	184	167	167	176	187	175	158	186	202	240	261	263	228	192	189	186
	(15)	(16)	(14)	(14)	(13)	(15)	(18)	(18)	(17)	(17)	(14)	(11)	(16)	(16)	(14)	(14)	(17)	(15)	(12)	(10)	(12)	(13)	(14)	(14)	
Fair Weather Mean	190	158	156	149	157	158	191	163	154	178	144	166	165	181	181	161	169	183	221	242	256	213	181	172	179
	(9)	(13)	(12)	(12)	(11)	(12)	(13)	(14)	(13)	(15)	(10)	(10)	(13)	(13)	(10)	(11)	(14)	(13)	(11)	(9)	(11)	(10)	(13)	(11)	

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

35 ESKDALEMUIR — Factor 2·33 — DECEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	25+	20+			30+	35+	25+	35	20+	30	25	30	30	40											
2																									
3				25	20	25				25	30	35	40	40	45	45	50	50	40	40	45	55	40	40	
4	40	55	55	45	35	45	30	25	15+	00+	10+														
5								15+	20+	35	40	40								50	50	45	50	65	
6	45	25	20	20	20	20	30	35	25	30	40	45	90		65	60	50	95	115	100	95	70	75	80	
7	50	40	40	40	45	45	40	45	40	45	85	320	260	280	265		390+	520+	585+	710+	475+	350+	235	215	
8	230	175	150	180	195	190	180	160	170	115	40	45	45	35	30	35	45	60	75	45	45	55	45	45	
9	40	30	20	30	25	25	25+	20					40	35	35	35	30	35	40	40	35	40	45	35	
10	30	35	35	30	30	25	15	15	20	20	25		30	45	55	95	140	120	110	95	75	55	60	55	
11	85	70+	85	85																		70	65	80	
12	60+	30	45	30	40	45	50	40	45	30	30	35+	145+	200+	235+	240+	290+	195	255+	255+	255+	185	140	135	
13	120	160	170	155	195+	185+	225+	165	135	115	135	125	145	175	225	195	220	240							
14												130+	155+	150+	160+	155+	200+	270+	230	225+	180	130	115		
15																					225	225	205	150	
16	125	130	125	125	115	95	110	120	160	195	205+		275	275	240	240	230	190	125	155	165	170	240	165	
17	130	105	115	125	135	145	145	115	130	135					285+				435+	375+	315+	500+	445+	370+	
18	260	190	120	160	165	125	125	105	95	140	170	215+	275+	365+	480+	565+	485+	425+	430+	345+	325+	265	195	175+	
19	175	115	130	160	225	280	285	420	340	300	180	170	180	205				440+	570+	630+	640+	585+	485+	270+	
20	140	100	115	120	105	130	125	210	240+	240+	225	365+	490+	540+	440+	515+	525+	260+	180	200					
21																			365+	280+					
22																									
23																	225+	420+							
24									130	135	130	130	120	105	120	305+	425+	660+	665+	470+	390+	285+	165+		
25												265+	235+	395+	595+	310+	395+	670+	610+	585+	395+	300+	335+	230+	
26	220	400+	545+	455+	400+	325+	330+	315+	280+	210+	205+	265+	190	175	200	205	240	215+		510+	545+				
27																									
28			125									210	235+	205	265	340									
29		115	135	120	115	125	125	125	145	150	175	135	160	170	275	335+	455+	345+	320+	335+	345+	275+			
30		250+	185+	300+						210		155			155			245	175	230	245	220	210		
31						115	130	155	170	150	200	170	205	215	175	170	165	160	185	150	265+	175	155	140	
Mean	111	114	123	123	111	110	117	118	121	115	108	152	167	192	217	226	253	281	290	277	255	203	174	159	172
	(16)	(18)	(18)	(18)	(17)	(18)	(17)	(18)	(18)	(20)	(18)	(19)	(20)	(19)	(20)	(17)	(18)	(20)	(19)	(21)	(20)	(20)	(19)	(16)	
Fair Weather Mean	121	93	93	91	91	96	107	112	123	109	102	124	129	143	154	142	130	139	127	111	116	126	125	100	117
	(14)	(14)	(16)	(16)	(14)	(15)	(13)	(16)	(13)	(17)	(15)	(13)	(14)	(14)	(14)	(10)	(9)	(10)	(10)	(10)	(10)	(14)	(15)	(12)	

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Monthly, seasonal and annual means for hours without hydrometeors and for fair weather hours

36 ESKDALEMUIR 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
	No hydrometeors																								
Jan.	170	165	163	147	162	158	178	188	189	185	192	226	224	242	254	286	333	365	338	359	319	276	226	192	231
Feb.	177	164	143	136	139	139	136	145	149	191	189	203	230	244	226	230	230	229	259	302	272	221	199	186	197
Mar.	135	138	146	128	126	133	125	122	118	130	163	152	121	154	146	177	141	179	221	199	194	152	144	129	149
Apr.	145	130	124	122	140	124	134	133	141	140	165	154	161	134	146	185	165	180	182	194	170	178	183	170	154
May	161	147	140	130	161	170	189	218	197	176	232	179	145	124	149	153	145	132	150	160	167	172	169	177	164
June	119	106	109	111	120	120	131	116	110	115	134	114	114	104	101	118	122	127	143	149	143	149	134	123	122
July	155	132	129	110	113	131	133	162	141	145	175	141	136	127	129	148	141	160	146	153	167	174	188	185	147
Aug.	165	136	138	152	154	138	153	163	150	161	149	169	147	147	157	151	154	163	192	166	188	178	175	171	159
Sept.	125	113	127	166	143	156	179	216	198	187	161	158	157	152	168	141	139	145	163	191	203	183	163	133	161
Oct.	149	149	170	160	148	152	176	180	165	167	153	156	156	155	183	167	203	222	209	223	232	247	207	172	179
Nov.	174	171	163	152	145	148	174	174	185	184	167	167	176	187	175	158	186	202	240	261	263	228	192	189	186
Dec.	111	114	123	123	111	110	117	118	121	115	108	152	167	192	217	226	253	281	290	277	253	203	174	159	172
Year	149	139	140	136	139	140	152	161	155	158	166	164	161	163	171	178	184	199	211	219	214	197	179	165	168
Winter	158	153	148	139	139	139	151	156	161	169	164	187	199	216	218	225	251	269	282	300	277	232	198	181	197
Equinox	139	133	142	144	139	141	153	163	155	156	161	155	149	149	161	167	162	181	194	202	200	190	174	151	161
Summer	150	130	129	126	137	140	151	165	149	149	173	151	135	125	134	143	141	145	158	157	166	168	167	164	148
	Fair weather																								
Jan.	159	186	161	153	175	153	167	177	166	167	173	226	247	255	296	248	309	322	268	314	286	252	217	191	219
Feb.	192	175	145	128	137	133	156	156	169	194	195	189	230	235	234	251	227	214	255	295	255	214	200	207	199
Mar.	165	145	156	136	139	139	155	124	129	133	140	147	118	120	165	180	157	183	201	203	193	153	161	138	153
Apr.	155	145	139	121	120	113	142	151	151	149	166	137	171	187	158	214	168	142	152	139	147	188	174	152	153
May	162	157	123	152	141	186	206	241	189	173	210	187	132	110	130	109	148	132	135	160	149	154	150	195	160
June	116	113	120	111	114	124	130	112	102	115	121	116	127	112	116	127	128	133	149	146	163	155	148	124	126
July	173	153	115	128	140	165	177	163	176	155	197	177	183	154	154	195	162	160	173	168	188	194	201	174	168
Aug.	178	162	155	143	148	141	133	116	143	166	151	152	167	156	159	153	162	167	176	176	205	230	205	181	163
Sept.	129	125	176	221	236	190	166	192	208	218	193	173	164	158	162	138	144	149	187	197	210	192	190	170	179
Oct.	159	159	175	173	166	151	155	172	154	159	175	151	157	157	214	170	179	236	247	252	245	252	221	171	185
Nov.	190	158	156	149	157	158	191	163	154	178	144	166	165	181	181	161	169	183	221	242	256	213	181	172	179
Dec.	121	93	93	91	91	96	107	112	123	109	102	124	129	143	154	142	130	139	127	111	116	126	125	100	117
Year	158	148	143	142	147	146	157	157	155	160	164	162	166	164	177	174	174	180	191	200	201	194	181	165	167
Winter	165	153	139	130	140	135	155	152	153	162	153	176	193	203	216	201	209	215	218	241	228	201	181	167	179
Equinox	152	143	161	163	165	148	155	160	161	165	169	152	153	155	175	175	162	177	197	198	199	196	187	158	167
Summer	157	146	128	133	136	154	161	158	153	152	170	158	152	133	140	146	150	148	158	163	176	183	176	169	154

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

KEW

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·31 — JANUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	435	420	365	345	335	330	365	390	425	470	480	515	480	430	470	470	630	640	745	755	700	685	675	680	
2	620	545	480	525	520	630	655	650	720	870	775	785	740	645	575	620	660	575	360	485	525	335	230	155	
3	375	315	320	305	285	260	320	605	855	895	810	735	645	625	590	730	830	640	520	510	595	565	415	340	
4	65	175	370	365	365	270	360	550	705	835	810	725	635	585	575	580	525	685	750	615	670	645	365	355	
5	350	345	335	315	260	220	260	375	400	530	530	615	470	480	360	305	440	460	325	300	250	200	110	160	
6	260	155	205	295	400	460	320	525	555	635	860	760	640	615	680+	785+	885+								
7															210+	325+	385+	315+	340+	315	340	265	185	160	
8	95	120	130	130	115	120	120	150			235+	260+	265+	265+										425	
9	395	290	335	355	285	175+	315+	500+	575+	655+	640+	525+	465+	365+	470+	495+	445+	435+	350	250	70	235	0+	0+	
10	−50+	−60+	0+	210	215	185	220	265	465	555	470+							80+	120+	0+	155+	25+	35+	45+	
11	110+	200+	85	105	125	135	105	185	295	430	465	410	430	465	465	470	420	475	415	355	265	130	105	130	
12	160							205+	335	420	470	445	430	315	370	340	290	290	295	255	200	90	50	45	
13	25	20	65	145	170	185	250	340	410	550	510	535	445	425	400	505	475	410	430	415	395	310	255	235	
14	220	230	230	330	225	175	340	450	420	–	–	–	500	450	310	310	365	365	420	415	365	360	365	300	
15	295	260	210	185	180	215	185+	180+	155+	280+				195+	170+	180+	185+	120+	155+	145+	110+	60+	140+	105+	
16	–	–	–	–	–	–	–	305+	420	480	395	445	430	410	375	420	420	400	365	410	290	260	305	285	
17	235	215	155	130	140	135	115+	130+	170+	210+	225+	315+	340+	320+	155+	215+	205+	200+	50+	−50+		95+	60+		
18							245+	315+			350	410	420	390									−30+	25+	
19	25+					70+	95+	190	260	390	410	390	365	355	365	375	420	340	230	210	290	365			
20			65	100	140	185	195+	190+	210+	210+	305+	365+	340+	305+	295	315	270	245	260					185+	
21	235	210	125						320	385	385	450	395	360	320		210	315	315	530	620	675	685	625	
22	575	210+	325	270	290	365	385	400	530	565	470	450	335	310	290	290	290			185	155	180	−25+	−10+	
23											270+				340+		500+	460+	525+			340+	340+	0+	
24					−25+	0+	200+	430+	395+	425+						435	375	355	430	305	260	335	415	410	
25	300+	390+	390+			175+					265+	270+	325+	260+	400	370	430	595	630	540					
26						270	420	500	525	575	645	575	570	515	440	475	330	365	500+	395+	460+	375+			
27			155+	70+	155+	185+	210+	255+		210+	290	280	280	365	400	360	390	450	435	370	285	290	260	215	
28	185	105		65+							185+								185	245	365	365	425	350	
29	295	280	260	215	115+			35+			185+	250+	245	255	260	315	355	365	255	355	390	315	285	210	
30	185	155	150	150	145	170	155	170	185	265	295	390	280	220	265	310	250	340	390	385	345	200	320	300	
31	250	260	215	180	235	280	230	280	370	375	365	365	285	270	320	325	365	365	485	420	325	290	220	220	
Mean	245	230	226	228	223	226	264	330	422	488	448	469	430	392	380	413	420	396	381	351	351	307	248	229	337
	(23)	(21)	(22)	(21)	(21)	(23)	(23)	(26)	(23)	(23)	(27)	(24)	(25)	(26)	(26)	(25)	(27)	(26)	(27)	(26)	(24)	(26)	(25)	(26)	
Fair Weather Mean	277	241	233	245	246	255	300	377	455	543	517	516	451	424	392	416	416	434	409	392	367	338	315	295	369
	(19)	(17)	(19)	(19)	(18)	(18)	(15)	(16)	(18)	(17)	(18)	(18)	(20)	(20)	(20)	(20)	(21)	(20)	(21)	(22)	(21)	(21)	(18)	(19)	

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·36 — FEBRUARY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	220	220	210	210	215	220	265	315								260	345	260	355	345	325	270	200	145	
2	160	80	80	95	105	210	175	200	410	390	315	370	360	300	305	330	380	395	495	425	420	420	365	235	
3	165	155	145	145	210	260	315	445	520	575	550	450+	335	330	365	395	450	520	465	430	365	420	420	410	
4	445	425	420	420	420	460	490	500	555	565	620	470	430	405	325	265	290	355	365	375	330	315	340	270	
5	270	240	270	340	375	–	–	–	–	510	510	475	465	440	290	255	340	290	280	305	185				
6											470	520	495	530	530	470	465	470	445						
7				65	45	50	105	305	525	520+	430+	260+	210+	155+	265+	315+	265+	500+	520+	315+	360+	465+	385+	105+	
8	210+	275	170	170	230	305	440	580	680	680	785	725	615	475	520	410	470	465	460	320	235	185	210	275	
9	385	460	510	365	375	370	550	600	725	795	800	750	710	595	575	520	430	450	460	540	365	205	160	125	
10	155	155	115	120	215	155	210				580	575	690	560	620	520	580	645	560	460	575	525	365	205	
11	115	120	15+	−15+	180+	135+	125+			230	325	205	350	385	425	425	265	295	220+	75+	295	350	355	290	
12	325	305	220	145	205	145	270	365	365	440	420	390	385	345	345	260	375	325+	405+	605+	45+	330+	320	335	
13	470	390	265	270	190	250	340	495	575	635	690	595	680	585	575	540	525	495	420	375	315	260	250	130	
14	105	155	155	155	150	155	210	315	490	525	600	635	620	595	675	625	525	435	375	300	225	185	145	150	
15	195	215	210	220	230	240	210	210	375	445	525	425	480+	565	500+	515	420	370	345	265	335				
16										220+	240+			200+	195+		475	430	575	305	315	600	460	420	
17	425	300	115												200+	440+	500+	635+							
18													470	375	325	315	315	200							
19			255	270	295	305	245	255+	160+	145+				260+		170+	170+	155+	165+	260+	200+	260	260	255+	
20	50+	115	105	115	135	130	200	285	405		325+	325+													
21	120+	120+	170	205	220	280				410+	330+	290+	285+		260+	380	460	390	290	460	365	345	305	285	
22	220	205	160	165	155	135	155	300	420		255+				185+	210+	215+	230	255	185			70+	25+	
23	45+	−15+	−70+		70+		170+	295+	355+	355+	340+		325+	305+	295+	325+	375	410	535	580	680	325	365	390	
24	535	510	460	495	610+	595+	535+	560+	400	560	425	315	205	245	220	265	410	470	460	445	370	285	150	235	
25	175	160	185	200	170+						250+	235	205	235	240+	270+				225	305	360	365	305	
26	260	210	205	185	155										110+	495+	400	420	575	580	545	520	470	460	
27	310	300	285	330	285	340	380	420+	390+	250+	290+	290+	315+	275+											
28						155+			365+	330+	280+	285+	285+				340	350	375	410	340	415	415	305	
Mean	244	232	202	212	228	245	284	379	454	452	450	429	425	389	363	374	391	398	409	373	341	352	304	255	341
	(22)	(22)	(23)	(22)	(23)	(20)	(19)	(17)	(17)	(19)	(23)	(20)	(21)	(21)	(23)	(24)	(25)	(25)	(23)	(23)	(22)	(20)	(21)	(21)	
Fair Weather Mean	274	250	224	223	222	236	285	378	496	529	544	477	468	435	435	397	411	397	426	386	363	347	312	276	366
	(18)	(20)	(21)	(21)	(19)	(17)	(16)	(13)	(13)	(12)	(14)	(14)	(15)	(16)	(14)	(17)	(21)	(21)	(19)	(19)	(19)	(18)	(19)	(18)	

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·22 — MARCH 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	335	310	285	275	260	265	290	370	455	385	315	340	335+			445+	360	345	355	440	445	350	300	275	
2	225	180	160		125	180	220	290	295	320	305	300	310	310	300	315	360	455	360	350	310	300	300	290	
3	240	240	230	225	190	200	280	400	445	390	400	375	350	400	335	330	330	300	315	330	295	250	225	205	
4	200	190	170	170	175	190	205	310	430	415	290	280	250	265	250	260	300	350	300	350	200	175	200	200	
5	320	300	115+				285	225	215	260	265	290	240	260	275	325	280	360	335	550	505	455	455	415	
6	370	335	300	240	145	190	155	265	370	265	280	240	240	270	325	340	350	370	375	355	315	335	250	255	
7	245	205	200	200	205	240	210	200	300	275	275	260	275	245	240	205	180	175	175	240	190	10+			
8					175			370+	500	370	320	330	305	210	210	250	340	350							
9										145+	190+	240+	240+									200+	260+	220+	
10	75+			120+			290+	440+	430+	415+		360+	375+				400+	395+				260+	330+		
11	335	265	275	200	215	205	240	320	325	300+				310+	260+	240+	250+		320	355	360+	300+	250+	230+	
12	205	190	190	190	190	200	260	335	335	320	320	260	275	310	310	300	230						60+	70+	
13	85+	250	165	205	250	320	345	500	600	535	430	400	380				400+	455	455	435	490	555	595	400	
14	300	100	100	50	40	55	150	160	225	275	250	250	275	300	295	325	370	350	250	315	260	245	200	175	
15	200	185	150	175	195	200	175	215	270	160+	235+	310	310	325	340	340	360	400	505	470	460	465	445	405	
16	345	290	215	225	225	250	300	350	400	340	400	340	300	280	340	340	385	455	495	545	530	585	605	300	
17	220	210	200	215	255	260	245	205	175+	190+	160+	175+	155+					10+	150	100	70	150	145	160	
18	150	150	140	100	135				210+	250+	250+	250+	235	225	200	195	200	220	250	260	250	250	250	260	
19	240	245	150	150	95	100	70+	40+	125+	125+	150+	175+	185+	200+	210+	230+	210+	185	200	235	250	225	200	190	
20	160	165	165	145	170	200	280	360	350	385	340	275	245	285	235	275	290	310	350	295	300	290	250	300	
21	150	200	240	310	285	265	300	440	455	350	305	315	330	350	360	330	300	300	200	190	100	150	130	250	
22	200	250	240	275	265	140	225	355	285	285	285	275	275	270	260	300	275	315	275	270	250	150	180	275	
23	235	245	225	235	240	260	310	400	395	330+	295+	285+		300+		300+	320+	260	355	385	515	455	480	435	
24	300	335	200	185	225	300	345	360	265	250	240	225	185	200	200	210	225	225	225	235	230	245	220	220	
25	185	145	125	125	135	130	140	140	150	175	175	200	265+	275+	250+	235+	200+	205	335	360	320	285	250	130	
26	110+				130+	135+	150+			275+	240+	480+	360+			200+	475+		375+	415+	465+			425+	
27					290	275	325	375	360+		225+	230+	215+	220+			210+		325+	655	645	515	385		
28	200	200	200	210	230	315	440	480	425+	365+	320+				325+		310	315	375	505+		520+	315	240	
29	265	225	235	255	285	300	385	475	400+	340+	300+	300+	310+	260+	250+				350	440	500	555	375	370	
30	330	320	250	240	250	350	400	565	590	520	400	320	285	270	275	250	225					400+	215	155	
31	85	95	120	130	340	350	515	755	455	545	505	455	380	370	325	360	300	230	275	335	320	325	510	440	
Mean	225	224	194	194	204	226	269	346	353	319	292	294	282	280	277	287	301	306	318	362	343	321	299	270	283
	(28)	(26)	(26)	(25)	(28)	(26)	(28)	(28)	(29)	(30)	(29)	(29)	(28)	(24)	(23)	(24)	(28)	(24)	(26)	(26)	(25)	(28)	(28)	(27)	
Fair Weather Mean	242	224	197	197	207	230	281	354	369	351	321	302	287	286	282	292	299	315	316	354	337	332	312	276	290
	(25)	(26)	(25)	(24)	(27)	(25)	(25)	(25)	(22)	(19)	(19)	(20)	(19)	(18)	(18)	(18)	(20)	(22)	(24)	(24)	(23)	(22)	(24)	(23)	

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·14 — APRIL 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	485	475	425	355	340	315	330	560	635	545	325	240	195	180	160	160	155	145	155	170					
2																				385+	350	365	385	295	
3	255	220	180	95	120	170	240	355	435	400	385	290			305	305	345	310	325	330	435	350	225	220	
4	200	200	235	200	220	285	370	485	385	345	285	260	275	285	290	260	245	230	195	245	180	140	140	140	
5	50	85	90	120	175	235	325	385	235+	255+	270+	355+	410+	420	310	360	300	240	235	245	185+	220+	205+	260+	
6	220+	140+	110+	130+	115+															210+					
7								235+	165+	290+	385+				360+	335+		385+	435	410	385	360	325	225	
8	170	140	50	80	200	165	225	270	285	325	335	290	190	185	190	200	210	240	260	320	325	275	395	400	
9	340	185+	110+	125+	160+	225+	200+	210+	150+	140+	165+	165+	170+	195+	210+	190+	140+						85+	115+	
10	15+	40+															265+	190+	0+	-10+	15+	-20+	-10+	-70+	
11	-70+	-150+	-30+	60+	-80+	-110+													60+	5+					
12																									
13					60+	150+					225+	310+	280	285	310	295	295		150	165	115	210	180	80+	
14	90+	35+	-120+	65+	-20+	210	400	360	405	555	535	525	465	405	395	445	385	310	295	290	325	340	190	90	
15	140	90	140	200	180	345	385	385	385	385	350	305	295	285	280	210	195	260	350	345	285	180	245	285	
16	320	335	275	245	185	335	435	400	355	395	335	335	325	325	325	310	285	285	270	315	340	345	415	370	
17	195	175	115	165	325	265	235	365	435	385	425	485	485	585	495	435	395	350	310	200	175	190	295	315	
18	335	235	330	285	335	435	350	325	390	435	425	435	370	340	345	385	385	335	305	345	385	255	110	115	
19	105	130	135	145	140	170	200	180	180	270	285	275	225	210	210	180	150	65	30+	0+	50+	90+	45+	45+	
20	60+	65+	65+	30+	30+	130	160	435	360	310	295	285	235	235	275	260	210	200	245	260	275				
21	225	270	300	305	355				575+	475+		360+	310+	275+	295+	235+	310+			325+	385+	425+	360+	350+	
22	485+	285	310	360	380	500	535	655	505	335	270	220	195	170	140	140	140	140	195			190	90	90	
23	135	80	100	125	150			85+	90+	65+	130+	140+	170+	140+	210+	195+	140+	230	200	90	110	200	340	335	
24	265	335	325	325	375	410	435	295	235	205	180	190	180	195	235										
25												295+	285+	425+	310+	435+	385+	410+	585+	485+	385+	410+	325	360	
26	325	235	160	140	130	205	255	720	720	535	285	215	165	155	210	190	210	190	190	170	165	160	140	130	
27	115	40	40	35	5	100		380	715	730	570	435	360	325	335	335	320	285	245	285	275	375	325	385	
28	395	335	235	205	205	225	410	640	595	535	450	455	435	445	425	370	310		170	-10+	165+	335	345	235	
29	335	205	235	285	285	290	290	310	260	260	235	215	235	170	140	190	275	275	260	260	380	505	250	215	
30	130	180	225	285	220	205	225	190	185	165	115	135	140	80	130	130	95	140	95	190	240	315	260	295	
Mean	213	175	168	182	184	239	316	374	377	363	316	301	278	275	276	273	256	248	232	232	258	270	236	220	261
	(25)	(25)	(24)	(24)	(25)	(22)	(19)	(22)	(23)	(23)	(23)	(24)	(23)	(23)	(25)	(24)	(24)	(21)	(24)	(26)	(23)	(23)	(24)	(24)	
Fair Weather Mean	238	213	206	208	228	263	323	405	415	395	338	311	281	278	275	272	258	235	244	257	279	283	262	250	280
	(19)	(19)	(19)	(19)	(19)	(19)	(18)	(19)	(18)	(18)	(18)	(18)	(18)	(19)	(20)	(19)	(19)	(18)	(20)	(18)	(17)	(18)	(19)	(18)	

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introductory). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·30 — MAY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	285	260	255	260	270	375	420	480	370+	345+														260+	
2	80+	180+	-25+	50	220	210	340	340	445	470	365	335	260+						155+	120+			315+	325	
3	315	200	185	95	185	325	495	585	570	350	245	230				220+		230+	185+	220+					
4																					105+	50+	180	195	
5	185	180	160	175						255+	155+					280	315	365	535	605			430+		
6					240+	155+			200+	210+	160+	130+	145	155	170	190	205	225	155+	305+	235+	175+	270	365	
7	305+	200+			50+												185+	155+			405	430	420	425	
8	390	270	220	210	260	305	305	290	260+	225+		235+	210	210+	210+	210+	185+	210+	235	270	430	485	375	335	
9	280	260	250	285	355	355	470	460	410	405	290	210	140	210	210	220	225	185	185	155	205	210			
10								635	420	290	360	365	375	260	260	260	260	340	355	155	40+	65+	120+	20+	
11	50+	0+	0+	-5+	50	155	365	435	500	340	470	620+			290+	185+	105+	95+	135+	70+	30+	145	195	110	
12	185		65	105	155	220	305	270	330	280				315	205	200	220	220	315	290	365	315	335	375	
13	420+	365+	445+	315+	425+	325+	430+	415+	355+	355+	345	315	265	255	250	185	155	185	235	315	330	175	260	360	
14		10+					105+	210+													260+	135+		315+	
15	100+	185+	200+		135+									0+	125	195	170	210	210	225	320	365	425	410	
16	260	155	200	200	180	235	225	305	270	250	245	205	235	230	245	210	210	265	270	330	365	170+	225+	210+	
17	185+					155+				230+	365+								210+		80+	95+	100+	105+	
18	185	200	330	410	500	500	565	575	555	420	330	410+		410+	335	385	325	210	210	220	155	220	185	155	
19	205	230	210	155	155															-65+	210	240	250	250	
20	235	220	210	180	155	170	210	235+	190+	185+	170+				350+		345+	220+	250	250	260	325	320	315	
21	280	250	235	240	210	250	200+	155+	130+	125+	105+	35+	95+	155+	145								50+	145	
22	185	205	205	145	215	230	255	270+					220+	230+	230+	215+			255+	255	255	270	245	220	
23	155	145	155	180	210	150+	200+	300+	290+	220+	330+						125+	260	210	270	320	265	235	195	
24						130+	105+		245+	250+							265+	240+	260+				495	465	
25	365	305	260	235	285	330	410+	390+				430+			75+					175+	305	260	215	235	
26	220	230	225	290	305	300	400	355+	315+				245+	260	255	225	210	235	200	220	300	355	420	470	
27	470	455	450	400+								115+	170+	130+	115+	145+	190+						115+	225+	
28								105+	185+		130+	145+		150+	155	150	130	155		125	225	315	365	245	
29	185		105	130	200	200	200	240	205	145+			155+	155+		345+	155	185	200	235	285	360	345	365	
30	290					155+									575+	470+			105+	175+					
31		105+	180	195	315	470	575	590	470	385	350	295	290	285	285	265	200	220	200	210	250	155	40+	60+	
Mean	242	220	205	202	231	259	329	364	336	287	276	272	216	213	236	240	209	221	230	223	249	243	267	265	251
	(24)	(21)	(22)	(21)	(22)	(22)	(20)	(21)	(20)	(20)	(16)	(15)	(13)	(16)	(19)	(19)	(20)	(20)	(22)	(23)	(23)	(23)	(26)	(27)	
Fair Weather Mean	260	255	217	197	235	289	366	434	417	354	333	279	237	246	220	230	214	233	258	258	293	288	307	298	280
	(18)	(14)	(18)	(18)	(18)	(16)	(14)	(12)	(10)	(9)	(9)	(7)	(7)	(8)	(12)	(12)	(13)	(14)	(14)	(16)	(17)	(17)	(18)	(20)	

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·36 — JUNE 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	150	70	60	40	110	280	395	370	490	465	405	325	260	305	315	295	200	305	255	205	80	70	110	135	
2	140	195	190	175				175	280	325	595+						275+	310+	145+	220	245	270	330	310	
3									330	255	215	215	165	135	135	165	135	130	130	175	270	205	280	230	
4	205	165	150	135	145	155	165	135	120	130	245	215	165	135	155	145	115	145	190	185	215		-10+	25+	
5	80	100	180	190	235	270	370	490	390	295	280	270	215	210	210	215	210	190	215	200	230	295	325	270	
6	220	205	125	145	165	185	210	320	295	270	305	200	260	275	315	220	215	190	205	185	195	240	270	315	
7	215	165	135	110	120	150	220	350	380	405	450	360	345	400	300	270	320	295	325	325	325	240	215	240	
8	245	245	230	240	280	370	475+	490+	425+	400+	395+				400+	280+			425+	210+	270	300	280	325	
9	270	335+	440+	435+	375	310	315	315	350	380	370	310	285	245	245	275	245	215	215	315	270	345	310	220	
10	165	245	215	205	195	270	360	325	270	255	230	215	175	170	165	155	165	165	175	215	260	220	165	265	
11	310	240	165	205	190	215	190	190	195	165	165	150	145	135	135	165	165	175	190	205	215	205	215	215	
12	235	185	150	165	230	395	415	455	435	435	425	320	270	280	260	245	245	240	190	165	250	165	260	320	
13	235	250	295	250	370	505	640	640	460	370	380	370	360	325	300	280	270	250	215	165	145	125	200	160	
14	110	75	120	235	100	215	380	595	720	515	500	455	390	315	315	300	270	245	215	205	140	110	125	90	
15	90	90	90	100	200	270	315	325	330	325	325	325	305	315	285	255	260	215	195	175	165	165	175	215	
16	135	135	120	155	150	200	295	335	360	335	380	330	315	350	325	315	285	270	220	200	210	150	220	275	
17	245	170+	195+	175+	120+	150+	165+	175+	100+	165+	205+	215+	165+	65+	115+	80+	150+	125+	140	150	175	230	250	325	
18	355	285	250	235	195	210	150	165	185	195	190	180	150	165	165	165	155	150	175	245	225	335	300	195	
19	150	185	235	200	250	270	285	405	380	215	185	195	200	215	255	230				120+	125	110	150	170	
20	170	170	145	120	185	210	260	215	215	220+	120+			80+	55+	15+	20+	120	110	105	100	185	275	200	
21	210	145	210	235	295	360	420	410	380	255	250	235	215	245	240	215	165	140	110	185	255	350	240	190	
22	190	190	140+	45+	55	70	185	230	205	215	145	150	150	215	235	150	190	180	180	200	170	150	175	275	
23	195	135	195	175	195	235	335	370	370	370	325	270	245+										145+	120+	
24	125+	135+	65+	85+	170+	90+	15+	185+	10+	-15+	65+	100+	110+							60+	-40+	85+	75+	145+	
25	250+	285+	135+	110+	185+	220+	175+	165+	325+	235+							150+	170	110	150	175	165	155	155	
26	110	90	55	60	70	110			190+	210+	235+	235+					165+	180	205			230	270	305	
27	250	245	215	205			435+	375+	270+	270+				255	285	325	300	270	170	215	210	245	235	200	
28	210	195	185	195	220	205	325	335	325	280	260	245	215	215	190	200	190	185	205	190	210	190	190	170	
29	165	120	120	110	110	150	205	200+	235+			230+	210+	200+	230	215	215	200	210	245	270	280	310	330	
30	285	260	265	270	300	380	470	570	445	315	245	270	310	255	245	255	210	185	165	110	55+	65+	85	100	
Mean	197	183	175	173	193	239	303	333	315	285	292	255	234	229	235	217	203	202	196	190	193	204	211	216	228
	(29)	(29)	(29)	(29)	(27)	(27)	(27)	(28)	(30)	(29)	(27)	(25)	(24)	(24)	(25)	(25)	(26)	(26)	(27)	(28)	(28)	(28)	(30)	(30)	
Fair Weather Mean	198	175	171	173	197	250	314	351	344	308	299	267	245	246	241	230	215	200	189	197	208	214	226	230	237
	(27)	(25)	(24)	(24)	(24)	(24)	(22)	(22)	(23)	(22)	(21)	(21)	(20)	(21)	(22)	(22)	(21)	(24)	(25)	(25)	(26)	(26)	(27)	(27)	

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·18 — JULY 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	75	100	160	160	150	245	265	305	355	305	265	230	155	125	155	145	100	125	150	155	100	215	215	205	
2	235	215	180	135	145	160	185	165	155	265	230	155	155	120	100	100	90	155	150	165	335	205	155	190	
3	170	165	170	155	205	235	265	315	330	295	240	205	195	205	200	205	200	180	170	155	220	195	205	180	
4	170	115	85	95	100	155	240	280	290	235	230	195	200	205	205	205	155	145	125	155	205	215	180	155	
5	140	145	140	155	100	155	350	460	430	295	260	250	230	230	205	205	195	205	185	155	150+	65+	75+	90+	
6	115+	155+	100+	145+	125+	100+	170	240	355	305	290	280	235	190	145	155	155	120	145	120	70	45	25	45	
7	50	60	80	75	60	115	175	295	355	355	265	215	240	180	185	155	175	165	205	215	280	305	285	200	
8								85+	195+	250+	255+	230	230	205	195	195	200	205	205	235	255	245	255	205	
9	155	155	150	180	275	330	345	305	215	205	165	155	165	165	165	155	145	155	180	190	70+	40+	125+	100+	
10	75+	60+	-	-	-	-	205	260	285	255	265	250	230	205	165	165	155	145	135	135	115	125	125	-	
11	-	-	-	75+	135+	165	280	355	355	410	560	600	425	295	250	230	250	205	155	155	50+	-75+	20+	-50+	
12	-30+	00+	25+	15+	110	255	355	450	340	400	375	315	320	285	305	305	290	355	370	290	290	245	205	205	
13	155	145	100	75	90	115	255	330	510	580	665	665	665	545	445	375	345	255		145+	105+	205+	150+	180+	
14	60	100	50	50	75	100+	205+	90+	110+	215+	200+	225+	245	205	205	170	165	170	155	355	355	275	320	240	
15	165	155	150	155	155	165	205	240	235	240	205	155	155	155	135	105	100	100	90	110	110	55+		10+	
16	25+	35+	25+	20+			110	140	145	195	280	285	255	190	155	170	205	205	245	300	410	330	120	40	
17	120	145	65	50	90	205	245	290	235	255	290	265	255	230	230	230	285	340	345	325	250	180	305+		
18			135+	155	255	135	250	410	425	370	330	315	255	225	240	265	280+	260	225			240	255	245	
19	195	150	155	155	145		255	300	305			270	220	235	215	240+	250+	355+	230+	345	410	435	365	240	
20	-	-	-	-	-	205+	270	355	355	305	305	255	215	205	230	230	215	195	155	195	230	255	350	200	
21	100	40	40	25	30	50	230	365	345	320	295	230	220	220	230	290	215	240	305	205	125	115	100	215	
22	145	205	205	100	85	155	355	420	495	460	295+	320	220	140	110						145+				
23										220+	155+			100	125	125	110	110	110	90	50	85	100	75	
24	70	60	55	55	100	170	245	305	420	315	230	245	220	195	175	170	160	175	180	215		195	215	330	
25	270	195	145	135	145	150	215	170+				245+	215	200	170	215	215	195	220	260	245	255	255	245	
26	165	105	115	135	145	195	270	280	345	295	315	290	245	215	195	210	185	155	145	125	145	190	190	145	
27	155	145	115	60	40+			195+	245+	245	215	215	175	205	185	210	165	180			90+	110+	185+		
28										425+	395	385	400	280	285	345	255	245	205	190	215	215	265	290	
29	240	215	185	195	240	410	345	430	320	295	290	195	170											-20+	
30		-10+	20+	-10+	-20+	35+	100+	120+	155+	110+	180+	155	115	100	110	120	165	185	145	185	265	255	240	215	
31	165	110	80	90	145	195	245	295+			255+	240+	245	245	170	225	215	205	215	285	385	365	370	280	
Mean	133	119	109	101	125	175	246	284	307	301	286	268	242	210	196	204	194	198	191	202	203	193	202	165	202
	(24)	(25)	(25)	(26)	(25)	(24)	(27)	(29)	(27)	(28)	(29)	(30)	(30)	(30)	(30)	(29)	(29)	(29)	(27)	(27)	(28)	(29)	(28)	(27)	
Fair Weather Mean	150	136	121	114	135	188	253	317	330	313	302	271	242	210	196	203	193	192	189	204	230	225	218	197	214
	(20)	(20)	(20)	(21)	(21)	(20)	(25)	(23)	(23)	(23)	(24)	(27)	(30)	(30)	(30)	(28)	(28)	(28)	(26)	(26)	(22)	(23)	(22)	(21)	

POTENTIAL GRADIENT (close to the ground, over an open level surface)
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·11 — AUGUST 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	220	170	155	135	110	120	265	205+	245+	295+	335+	245+	245+			220	215	245	240	265	245	205	220	245	
2	165	120	90	90									305	295	245	255	230	170	150	130	155		65	30	
3	75+	130+	130+	145+	190+	275+	335+	340+	370+	320+			210+		235+	210+	160+					200+	210+	175+	
4	155	95	95	110		160	250	375	375	250	220	185	180	185	220	185	120	110	185	250	235	250	320	355	
5	280	200	180	155	170	235	310	360	345	245	230	160	135	125	125	110	95	95	95	170	160	185	185	185	
6	220	180	155+	130+								170+	95+	75+	110+	75	55	30	50	60	85	95+	25+	275+	
7	260+	285+	210+	155+	150+	145+	300+	500	335	250	250	185	175	180	215	220	170	185	200	200	250	295			
8	145	105	85	100	145	225	285+					235+	250+	175+	160+	175+	135+	105+	235+	230+					
9		80	75	75	125	135	205	260	255	250	210	185	200	195	220	220	200	185	250	260		250	295	305	
10	260	205	185	125	125	180	220	280	250+	170+		185+	175+	200+		310+	370+	385+	250+	250+	300+		235+	105+	
11	100	80	75	55	60	135	235	260	195	195	210	195	160	150	150	155	170+			240+	340	310	280	235	
12	230	175	185	175	200	240	265	325	315	235+	270+	200+	125+	220+	205+	130+	130+	210+	265+	220+	285+	200+	235+	170	
13	95	110	95	175	165	180	190	235	270	205	240	195	200	195	175	140	160	175	200	280	265	240	305	280	
14	180											165+	255+		305+	345+			265+	330	340	290	245	220	
15	200	200	185	190	210	270	350											395+	320+	440+	-	-	-	-	
16	-	-	-	-	90	185	375	485	360	320	290	270						170+			280+	340	350	340	
17	280	230	195	200	190	250	305	335	350+	305+	295+	260+	265+	230+	245+	235+	220+	235+	315	365	430	325	270	315	
18	235	250	180	165	165	200	300		300	255	265	215	220	210	230	195	210	250	220	240	305	350	315	350	
19	265	230	190	125	165													-10+	200+	220	275	250	285	300	
20	270	175	165	130	165	185	315	500	440	415	340	270	200	200	190	175	180	175	135	30	90	65	75	105	
21	110	145	165	145	105	95	280	620	625	520	450	440	385	340	355	365	270	260	270	345	225	155	195	195	
22	140	105	65	65	95	110	300	545	685	650	570	440	320	280	265	305	270	290	150	125	45	30	55	45	
23	45	20	60	35	35	75	200	345	475	485	525	530	495	400	285	315	350	295	235	160	45	30	45	45	
24	90	175	110	120	165	145	270	350	340	385	385	395	370	330	325	290	270	210	130	80	90	90	80	45	
25	20	20	15	40	55	45	60	140	235	240	255	305	300	300	265	265	200	195	210	155	95	95	90	80	
26	45	35	30	45	35	35	90	220	315	340	280	255	235	240	185	140	160	165	215	90	80	55	35	35	
27	20	45	45	30	35	45	80	200	205	200	175	155	150	105	90	60	125	55	80	90	60	80	90	55	
28	35	30	35	20	10	20	40	130	275	300	275	300	175	155	130	130	135	130	170	225	90	55	25	20	
29	45	20	35	20	10	20	75	290	305	325	320	185	110	175	165	95	105	95	160	175	185	130	160	100	
30	70	90	95	60	65	50	90	375	455	375	350	240	200	175	150	130	90	25	80	110	240	150	195	245	
31	200	165	130	125	115	165	260	285	305	270	275	220	165	185	160	150+	70+	95+	125+	85+	140	185	150	120	
Mean	154	133	118	108	117	145	231	332	345	312	305	251	225	213	208	200	180	176	193	201	197	182	180	178	203
	(29)	(29)	(29)	(29)	(27)	(27)	(27)	(24)	(25)	(25)	(23)	(27)	(28)	(25)	(26)	(28)	(27)	(28)	(28)	(29)	(27)	(27)	(28)	(28)	
Fair Weather Mean	153	128	112	104	112	140	222	337	353	324	306	266	234	221	207	193	181	167	178	189	186	184	180	177	202
	(27)	(27)	(26)	(26)	(25)	(25)	(24)	(22)	(21)	(20)	(20)	(20)	(20)	(20)	(20)	(21)	(20)	(20)	(21)	(23)	(24)	(24)	(24)	(25)	

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introductory). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 1·94 — SEPTEMBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	150	130	150	80				160+	310+	210+	245+	255+	280+	240+	240+				150+		130+		40+	80+	
2	45+	35+			95	150	210	275	300	240	300	220	230	190	125	70	90	130	220	315	380	420	350	315	
3	255	170	150	105	110			175+						215+	265	235	230	220	265	250	300	295	255	210	
4	175	160	150		150	145	275	380	385	350	350	300	310	275	250	175	165	130	200	300	280	325	275	165	
5	90+	80+						260+	300+	275+	250+	210+	200+				175+	165+	220	220		200	200	175	
6	160	145	155	155	185	220+	205+	215+	310+	275+	260+	220+	230+	235+	235+	130+	140+	55+	20+	155+	-	-	-	-	
7	-	-	-	-	-	-	-	-	-	530	530	420	350	300	240	275	335	215			-	-	-	-	
8	-	-	-	-	-	-	-	-	-	500+	475+	390+	405+	315+	260+	255+	165+	-55+	30+	100+	140+	100+	55+	80+	
9	90+	90+	90	55	40	40	65	180	385	375	350	265	170	135	125	110	130	80	35	20	25	65	50	50	
10	35	35	40	45	55	55	90	110	95	135	130	140	200	210	200	175	130	125	50	45	80	85	55	55	
11	45	30	25	20	25	80+	125+	125+	210+	160+	175+	130+	105+				-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	-	350+	280+	350+	330+	240+	220+	265+	310+	350+	265+	310+	370+	285	275	200	200	175	
13	130	90	90	95	145	260	385	425					350+	415+					200+	225	185	230	240	200	
14	130	90	90+	130+			265+	280+								165+	45+				90+	60+			
15							215	235	340	310	290	310	355	220	210	250	250	195	145	110	165	80+	90+	-30+	
16	-75+	-10+	0+	-20+	80+	105	220	220	240	265	255	240	125	95	95	155	165	155	190	200	140	125	90	90	
17	65	55	65	65	45	80	95	90	175	170	130	110	110	130	130	130	165	200	255	310	150	85	115	130	
18	75	45+								520	425	350	260	220	305	285	260		150	265	460	440	405	310	
19	195	170	130						375+	200+	330+	345	285	280	240	265	265	295		300			340	265	
20	160	175	175	165	165	200	325	460	430	385	315	220	200	220	260	265	220	280	325	395+	315+	270+	280+		
21								420+	530+	555	570	495	450	375	340	310		115+	175	155	115	210	175	160	
22	185	125	130	155	165	190	265	350	440	405	310	315	320	310	285	310	325	310	220	220	220	265	310	365	
23	265+	265+	285+	350+	310+	310+		410+			90+			90+							190	440	470	440	
24	395+	340+	265+	255+	255+	165+	130+	85+								100+	275	265	180	210		180	175	175	
25	155	130	110	165	230	-	-	-	470	395	385	330	275	170		90+	175+								
26	220	185		150	220	310	440	570	565	310	140+			220+		255+	300	345	395	485	485	395	340	265	
27	310	265	210	140	125	310	395	505	470	380	290	265	260	310		350	310		230	200		90	125+	90+	
28	100+			145+	230+	220+	255+		350+	350	325	315	310	360	280	350	395	420	385	350					
29	220	220	230	240	230	285	350	460							205	240	165							150	
30	175	195	190	205	255	255	340	420	410	310	265		220	245	220	245	265	385	440	440	440	345	320	300	
Mean	150 (25)	134 (24)	137 (20)	135 (20)	156 (20)	188 (18)	245 (19)	298 (24)	351 (21)	331 (24)	301 (25)	277 (22)	259 (24)	242 (25)	230 (21)	222 (25)	216 (25)	207 (21)	211 (23)	241 (23)	228 (20)	223 (22)	215 (23)	183 (23)	224
Fair Weather Mean	158 (18)	139 (17)	131 (16)	123 (15)	140 (16)	183 (13)	262 (14)	334 (14)	362 (13)	352 (17)	326 (16)	290 (16)	261 (17)	238 (17)	222 (17)	233 (18)	234 (19)	234 (16)	227 (18)	245 (20)	243 (16)	244 (18)	243 (18)	210 (19)	235

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·03 — OCTOBER 1967

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
1	245	225	225	190	170	160+	215+	215+	265+	190+		150+	230+	225+	225+		265+	280	215	295	310	290	220	135+	
2	90+					170	315	430	420	340	310	235	225	225		285	310	375	445	460	465	410	355	240	
3	235	115	90	105	180	215	360	445			275+		255+	315+	205+		225+						270	270	
4	205	190	185	225	255	330	440				410+	315+	290+	360+		370+	360	395	455	460	555	410	420	360	
5	290	250	235	-	-	-	-	-	535	460	485	425	360	350	315	325	365	360	405	380	350	360	315		
6								215+	295+	340+	365	340	295	315	325	280	280	340	380	310	250	300	270	180	
7	170	160	120	100	115	135	180	155+				210+	315	255	250	270	325	360	445	530	610	575	360	265	
8	205	170	120	105	90	110	135	115	150	180	195	180	180	215	225	235	315	225	270	310	370	410	280	170	
9	155	205	190	160	160	180	245	290	310	340	275	215	240	275	280	270	270	255	265	240+	180+	180+	135+	135+	
10	135+	125+	120+	105+	55+		115+	115+	225+				145+	180+					70+	135+	135+	90+	135+	70+	
11	45+	40+	35+	35+						80+															
12		95+	220	315	350	360							300+	270+	410+	360+								315+	
13	285	235	225	195	190	245	405	455	410	370	330	270	260	270	270	270	305	315	435	460	460	455	400	290	
14	200	170	160	145	135	135	175	215	180+												235	225	120	180	
15	180	170	165	155	145	135	180	225	270	270	260	250	270+	305+	330+	360+									
16				130	135	235	440	645																	
17					55+					225+	355+			245+	265	225	260	225	270	335		235	265	215	
18	190	200	180	205	265	315	430	605	620	535	445	385	330	285	265	270	240	-	-	-	-	-	-	-	
19	-	-	-	-	-	-	-	-	145+	90+					235	245	325	370	360	410	455	500	460	385	
20	360							225+	260+	280+	175	185	205	225	260	265	230	225	195	160	110	90	65	90	
21	120	70	90	80	80			280+	240+	270+	265+	265+													
22		165	95	35	5	45	90	170	135	235	305	315	200	220	180	180	135	-	-	-	-	-	105	135	
23	165	165	180	155	135	170	200	265	430	445	400	295	270	265	295	310	355	355	310	265	115	180	315	295	
24	240	245	250	225	240	200	240	410	405	365	290	310	285	350	360	335	425	490	475	470	490	475	490	405	
25	240	305	225	235	240	275	290	350	330		265+		250+	265+	205+						230	270	290	245	
26	180	130	170	170	180	180	280	360	395+	325+	285+	240+	235+	265+	270+		285	315	315	350	410	375	430	410	
27	360	290	315	370	295	410									250+	295+					180+	135+			
28	35+	70+	70	110	175	245	350	375	445											370+			295	360	
29	260	315	335	325	395	455	475	530	590	555	500	430	315	315			505	595	635	645	745	840	830	825	
30	635	525	455	365	410	500	530	590	725	770	690	580	495	445	430	410	435	500				180+	75+		
31							135+	325+	520+	550+	500+									190+	330	215	135	140	
Mean	218 (24)	193 (24)	186 (24)	177 (24)	186 (24)	237 (22)	283 (22)	334 (24)	361 (23)	343 (21)	351 (21)	294 (19)	270 (22)	280 (23)	279 (21)	293 (19)	311 (20)	352 (17)	350 (17)	357 (19)	349 (20)	327 (22)	293 (24)	266 (23)	287
Fair Weather Mean	246 (20)	215 (20)	195 (22)	186 (22)	197 (22)	245 (21)	303 (19)	381 (17)	413 (14)	405 (12)	359 (14)	315 (14)	284 (14)	286 (14)	283 (14)	278 (15)	318 (18)	352 (17)	367 (16)	389 (15)	382 (17)	367 (18)	319 (21)	287 (19)	306

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·05 — NOVEMBER 1967

volts per metre

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
1	265	285	310	350	405	530	665	720	665+											395+	540	620	465	375	
2	360+										305+			450+						90+	305	420	350	270	
3	305	240	130	90	135			290	375	375	345	315	360	395+	405+	510+	595+	715+	605+					405+	
4	680+	680+															-	-	-	-	-	-	-	-	
5	-	-	-	-	-	-	-	-	-						-	-									
6		-	-	-	-	-	-	-	405	450	425	395	415	350	360	405	375	370	380	450	620	540	625	555+	
7	620+	620+	595+	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8												530+	485+	435+	415+	395+	495+	390+	-	-					
9											495+	285+			200	335	495	630	395	315	240	350	435	450	
10	380	310	315	-	-	-	-	-	-	680	820	815	765	530	450	470	285	260	315	285			245	210	
11	185	120	80	105	155	135	135	110	170	225	270	335	360	350	275	350	290	135	90	125	180	280	245	245	
12	235	225	315	355	260+	270+	235+	225+	175+	375	495	550	500	395	405	350	155	155	80	90					
13	-	-	-	-	-	-	-	-	-	380+			350+										300+		
14			175	155										395	435	435	505	500	530	595	550	550	535	305	
15	-	-	-	-	-	-	-	-	-	450	505	550	495	440	360	395	455	520	560	560	550	540			
16	120+	-10+				90+	155+					215+	505	585	585	575	685	750	690	540	460	710	665	630	
17	-	-	-	-	-	-	-	-	-	990+	985+	995+	985+	910+	900+	850+	775+	770+	675+	610+	575+	305+	240	205	
18	810	90	-	-	-	-	-	-	-	-	705	620	560	640	575	465	405	440	415	270	360	315	195	100	
19	85	180	45+	-120+	55+	155+	115+	185+	125+	100+	45+	65+	210+	270	180	200	225	280	350	315	270	270	260	305	
20	225	235	280	200	315	420	430	485	515	495	465	585	575	560	540	520	555	550	525	505	530	450	370	360	
21	315	225	170	180	125	135	-	-	-	540	630	650	630	585	540	540	495	450	540	560	585	585	550	495	
22	450	415	275	185							650	560	450	400	350	305	360	300	365	420	385	410	495	475	
23	450	415	410	365	360	280	285	335	410	460	485	495	495	515	495	450	405	405	440	360	315	235	180	100	
24	125	140	215	170	215	315	300	400	405	455	545	540	530	400	410	360	-	-	-	-	-	-	-	-	
25	110	80	80	120	135	140	195	190	235	255	270	270	180	185									95+	195+	
26	315	405	415	305	240	280	240	255	420	550	660	630	450	415	405	395	435	400	245	255	190	145	135	-	
27	-	-	-	-	-						585+	640	360	315	450	505							460+	390+	
28	350	240	275	200	165	140	225	315+						100+	300	305	315	370	360	315	325		275	265	
29	220	225	200		125	135		365	545	505	595	640	510	550	650	625	675	575	330	270	180	225	170	135	
30	200	270	280	315	335	420	515	445	535	720	680	675	575	480	450	350	330			395+	390+	350+	410+	405+	
Mean	324 (21)	269 (20)	254 (18)	198 (15)	216 (14)	246 (14)	291 (12)	332 (13)	383 (13)	471 (17)	522 (21)	516 (22)	488 (22)	444 (24)	441 (23)	439 (23)	443 (21)	448 (20)	415 (19)	368 (21)	397 (19)	406 (18)	350 (22)	327 (21)	375
Fair Weather Mean	296 (17)	241 (17)	245 (16)	221 (14)	226 (12)	266 (11)	332 (9)	359 (10)	401 (10)	467 (14)	534 (16)	545 (17)	484 (18)	440 (19)	421 (20)	417 (20)	414 (18)	417 (17)	389 (17)	366 (17)	387 (17)	415 (16)	357 (18)	308 (16)	373

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Mean values for hours without hydrometeors and for fair weather hours

37 KEW OBSERVATORY — Factor 2·09 — DECEMBER 1967

volts per metre

	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
1								-	-	355+							410+	450+	450+	420	450	505	450	450	
2	410	370	270	260							215+			275+	265+	275+	325+	410+	380+	215+	185+	220+	125+	145+	
3	190+	200+	225+	225+	125+	190+		230+	315	370	370	410	315	355	315	325	360	370	390	405	370	360	285	270	
4	315	325	325	335	335	330	315	270	355	500	500	485	455	555	530	360	260	230	180	100	140	235	180	180	
5	135	65	70	155	195	220	230	360	455	420	425	485	455	405	445	380	420	400	280	270	315	330	270	235	
6	150	125	95							415+	575+	635+	755+	590+	575+	555+	650+	680+			110+	45+	175	435	
7	490	505	440	405	510+	390+	430+	455+	770+	780+	830+	680+	740+	675+	680+	860+	715+	880+	1010+	970+	500+	360+	45+	120+	
8	90+	135+	235	170	295	280						590	780	855	760	635	665	680	445	465	690	625	455	150+	
9	175+	410+	490+	625+	740+	555+	415	545	725	725	770	750	660	455				-	-	-	-	225	225	265	
10	185	225	265	280	250	320	135	125	225		305	410	565	500	645	600	360	90	55	65	75	150	160	225	
11	320	315	320	320	355	530	555	610	555	610	600	690+	885+	950+	815+	775+									
12			-	-	-					455+	360+		360+						235	280	215	420	410	360	
13	225	180	265	225	265	225	400+	545+			745+	725+	670	645	655	500	410	420	315	180	80+	80+	100+	-	
14	-	-	-	-	-	-	-	-	-	-	-	440	475	455	450	500	475	420	405	455	380	325	315	270	
15	315	175	170	225	195	220	240	275			410	415	410				385	310	355	375	295	265	225	225	
16	195	180	170	125					180	315	490	590	440	410	470	505	530	455	505	555	455	590	580	455	
17	545	465	445	410	360	380	480	455	490	690	760	725	780	690	720	820+	870+	955+	665+					135+	
18	165+	-	-	-	-	-	-	-	-	310+	815+	1040+	1085+	1085+	1075+	945+	770+								
19											715+	905+	1050+	1035+	1035+	1015+	1005+	1005+	1020+	960+	940+	930+	680+	455+	
20	205+	160+	-	-	-	-	-										-	-	-	-	-	-	115+	225+	
21	490	480	435										170+				25+	185+	170+	115+	20+	35+	80+	135+	
22	45	45	105	130	170	215	310	360	545	455	455	455	405	445	445	415	315+			265+	190+		160+		
23											345	360	355	355	395	415	460			280+			325	315	
24	305	225	215	180	180	200	240	285	360	415	400				600+	655+	725+	845+	750+	735+	590+	425+	485+	445+	
25	420+		225+	180+	170+						135+		340+			45+	90+	100+						260+	
26	90+	180	180					170+	60+	150+		495	490	435	450	500	485	490	460	500	470	310+	0+	-55+	
27	90+	225+	120+																215	265	290	135	225	180	
28	190	150					345	460	680	650	640	630	500	455	580	650	710	860+	815+	890+	815+	580	310	290	
29	245	265	310	265							460	500	535	575	535	485	505	500	445	400	330	390	350	360	
30	375	385	410	500	460	435	505	540	715	695	620	610	590	500	545	445				270	215	235	355	340	
31	265	260	260	270	275	290	305+	265+				290+	315	320	325	315	450	515	510	520	550	600	590	555	
Mean	255 (26)	252 (24)	263 (23)	278 (19)	305 (16)	319 (15)	350 (14)	372 (16)	459 (14)	489 (17)	519 (23)	579 (23)	561 (26)	566 (23)	579 (23)	541 (24)	495 (25)	511 (22)	457 (22)	415 (24)	361 (24)	349 (24)	284 (27)	275 (27)	410
Fair Weather Mean	289 (18)	259 (19)	262 (19)	266 (16)	278 (12)	304 (12)	343 (11)	390 (11)	467 (12)	531 (11)	503 (15)	522 (16)	511 (18)	495 (17)	517 (16)	469 (15)	463 (14)	407 (12)	343 (14)	345 (16)	349 (15)	373 (16)	327 (18)	318 (17)	389

The potential gradient is reckoned as positive when the potential increases upwards. The small + denotes a non-fair weather hour (see Introduction). No entry is made for hours with hydrometeors and dashes are inserted for hours of defective record. The number of hours or days used in computing each mean is shown in round brackets.

POTENTIAL GRADIENT (close to the ground, over an open level surface).
Monthly, seasonal and annual means for hours without hydrometeors and for fair weather hours

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	Hour GMT 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Mean
	volts per metre																								
	No hydrometeors																								
Jan.	245	230	226	228	223	226	264	330	422	488	448	469	430	392	380	413	420	396	381	351	351	307	248	229	337
Feb.	244	232	202	212	228	245	284	379	454	452	450	429	425	389	363	374	391	398	409	373	341	352	304	255	341
Mar.	225	224	194	194	204	226	269	346	353	319	292	294	282	280	277	287	301	306	318	362	343	321	299	270	283
Apr.	213	175	168	182	184	239	316	374	377	363	316	301	278	275	276	273	256	248	232	232	258	270	236	220	261
May	242	220	205	202	231	259	329	364	336	287	276	272	216	213	236	240	209	221	230	223	249	243	267	265	251
June	197	183	175	173	193	239	303	333	315	285	292	255	234	229	235	217	203	202	196	190	193	204	211	216	228
July	133	119	109	101	125	175	246	284	307	301	286	268	242	210	196	204	194	198	191	202	203	193	202	165	202
Aug.	154	133	118	108	117	145	231	332	345	312	305	251	225	213	208	200	180	176	193	201	197	182	180	178	203
Sept.	150	134	137	135	156	188	245	298	351	331	301	277	259	242	230	222	216	207	211	241	228	223	215	183	224
Oct.	218	193	186	177	186	237	283	334	361	343	351	294	270	280	279	293	311	352	350	357	349	327	293	266	287
Nov.	324	269	254	198	216	246	291	332	383	471	522	516	488	444	441	439	443	448	415	368	397	406	350	327	375
Dec.	255	252	263	278	305	319	350	372	459	489	519	579	561	566	579	541	495	511	457	415	361	349	284	275	410
Year	217	197	186	182	197	229	284	340	372	370	363	350	326	311	308	309	302	305	299	293	289	281	257	237	284
Winter	267	246	236	229	243	259	297	353	429	475	485	498	476	448	441	442	437	438	415	377	363	353	297	271	366
Equinox	201	181	171	172	183	223	278	338	361	339	315	291	272	269	265	269	271	278	278	298	295	285	261	235	264
Summer	181	164	152	146	167	205	277	328	326	296	290	261	229	216	219	215	197	199	203	204	211	205	215	206	221
	Fair weather																								
Jan.	277	241	233	245	246	255	300	377	455	543	517	516	451	424	392	416	416	434	409	392	367	338	315	295	369
Feb.	274	250	224	223	222	236	285	378	496	529	544	477	468	435	435	397	411	397	426	386	363	347	312	276	366
Mar.	242	224	197	197	207	230	281	354	369	351	321	302	287	286	282	292	299	315	316	354	337	332	312	276	290
Apr.	238	213	206	208	228	263	323	405	415	395	338	311	281	278	275	272	258	235	244	257	279	283	262	250	280
May	260	255	217	197	235	289	366	434	417	354	333	279	237	246	220	230	214	233	258	258	293	288	307	298	280
June	198	175	171	173	197	250	314	351	344	308	299	267	245	246	241	230	215	200	189	197	208	214	226	230	237
July	150	136	121	114	135	188	253	317	330	313	302	271	242	210	196	203	193	192	189	204	230	225	218	197	214
Aug.	153	128	112	104	112	140	222	337	353	324	306	266	234	221	207	193	181	167	178	189	186	184	180	177	202
Sept.	158	139	131	123	140	183	262	334	362	352	326	290	261	238	222	233	234	234	227	245	243	244	243	210	235
Oct.	246	215	195	186	197	245	303	381	413	405	359	315	284	286	283	278	318	352	367	389	382	367	319	287	306
Nov.	296	241	245	221	226	266	332	359	401	467	534	545	484	440	421	417	414	417	389	366	387	415	357	308	373
Dec.	289	259	262	266	278	304	343	390	467	531	503	522	511	495	517	469	463	407	343	345	349	373	327	318	389
Year	232	206	193	188	202	237	299	368	402	406	390	363	332	317	308	303	301	299	295	299	302	301	281	260	295
Winter	284	248	241	239	243	265	315	376	455	517	525	515	479	449	441	425	426	414	392	372	367	368	328	299	374
Equinox	221	198	182	179	193	230	292	369	390	376	336	305	278	272	265	269	277	284	289	311	310	307	284	256	278
Summer	190	173	155	147	170	217	289	360	361	325	310	271	239	231	216	214	201	198	203	212	229	228	233	225	233

"Winter" comprises the four months January, February, November, December; "Equinox" the months March, April, September, October; and "Summer" May to August.

POTENTIAL GRADIENT, AIR-EARTH CURRENT AND CONDUCTIVITY - WILSON METHOD

Mean value for periods of twenty minutes about 1430 GMT

F = Potential gradient, unit 1 v.cm.$^{-1}$. i = Air-earth current, unit 10^{-18} amp. cm.$^{-2}$
$\lambda+$ = Conductivity due to positive ions, unit 10^{-18} ohm.$^{-1}$ cm.$^{-1}$

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	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE		
	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$
1	...	...	...	...	...	...	4·24	140	33	...	...	...	...	...	...	3·29	109	33
2	5·32	133	25	2·63	97	37	3·31	115	35	...	...	...	3·86	205	53	...	...	...
3	5·93	129	22	3·81	137	36	3·96	140	35	3·30	121	37	...	...	...	...	...	...
4	5·44	135	25	...	...	...	...	...	...	2·91	134	46	...	...	...	...	...	...
5	3·49	79	23	...	...	...	...	...	...	3·35	154	46	...	...	...	2·02	115	57
6	7·06	122	17	5·52	150	27	3·91	111	28	...	...	...	...	...	...	3·20	157	49
7	...	...	...	...	...	...	2·15	209	97	4·15	171	41	...	...	...	3·00	115	38
8	...	...	...	5·96	218	37	1·98	195	98	...	...	...	2·03	178	88	...	...	...
9	...	...	...	5·89	202	34	...	...	...	...	...	...	1·96	153	78	2·59	142	55
10	...	...	...	6·32	155	25	...	...	...	...	...	...	2·74	155	57	...	...	...
11	4·29	227	53	...	...	...	...	...	...	...	...	...	3·04	158	52	...	...	...
12	3·69	163	44	...	...	...	...	...	...	...	...	...	2·39	205	86	2·78	167	60
13	4·51	187	41	6·11	196	32	...	...	...	...	...	...	...	...	...	2·90	115	40
14	...	...	...	6·75	186	28	2·90	166	57	4·13	193	47	...	...	...	3·19	180	56
15	...	...	...	5·18	226	44	3·42	175	51	...	...	...	...	...	...	2·98	160	54
16	4·32	198	46	...	...	...	3·20	180	56	...	...	...	2·33	215	92	3·41	180	53
17	1·29	79	61	...	...	...	...	...	...	4·66	207	44	...	...	...	...	...	...
18	...	...	...	...	...	...	...	...	...	3·48	221	63	3·24	171	53	...	...	...
19	3·18	291	92	...	...	...	...	...	...	2·07	130	63	...	...	...	2·51	112	45
20	2·87	139	48	...	...	...	2·27	101	44	2·36	118	50	...	...	...	...	...	...
21	...	...	...	...	...	...	3·64	171	47	...	...	...	...	...	...	2·18	154	71
22	...	...	...	...	...	...	2·75	101	37	...	...	...	2·24	231	103	2·32	173	75
23	...	...	...	...	...	...	3·22	151	47	...	...	...	...	...	...	...	...	...
24	...	...	...	...	...	...	...	...	...	2·43	171	70	...	...	...	...	...	...
25	3·88	204	53	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	4·37	195	45	...	...	...	...	...	...	2·14	115	54	...	...	...	...	...	...
27	...	...	...	...	...	...	...	...	...	3·26	–	–	...	...	...	...	...	...
28	...	...	...	3·41	121	35	...	...	...	4·44	223	50	...	...	...	1·85	102	55
29	...	...	...				2·30	132	57	...	...	...	...	...	...	...	...	...
30	2·07	160	77				2·50	181	72	...	...	...	5·82	116	20	2·44	158	65
31	...	...	...				3·19	172	54				3·24	169	52			
Mean	4·11	163	45	5·16	169	33	3·06	153	53	3·28	163	51	2·99	178	67	2·71	143	54
No. of days used	15	15	15	10	10	10	16	16	16	13	12	12	11	11	11	15	15	15

	JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$	F	i	$\lambda+$
1	...	...	...	...	...	...	2·56	135	53	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	1·72	101	59	...	...	...	...	...	...
3	2·15	158	73	...	...	...	...	...	...	...	...	...	4·16	145	35	...	...	...
4	2·10	180	86	2·14	187	87	2·54	138	54	4·29	175	41	...	...	...	4·82	128	27
5	2·07	186	90	...	...	...	...	...	...	...	...	...	...	...	...	4·66	128	27
6	1·57	125	80	...	...	...	2·72	134	49	3·36	159	47	3·57	146	41	5·43	114	21
7	1·82	152	84	2·08	165	79	1·81	118	65	...	...	...	...	...	...	6·94	119	17
8	...	...	...	1·56	67	43	...	...	...	...	...	...	3·77	114	30	...	...	...
9	...	...	...	2·24	80	36	...	...	...	2·91	167	57	...	...	...	...	...	...
10	1·71	99	58	...	...	...	...	...	...	...	...	...	4·75	217	46	...	...	...
11	2·52	79	31	1·40	68	49	...	...	...	...	...	...	...	...	...	6·87	100	15
12	3·48	120	34	...	...	...	2·93	162	55	...	...	...	...	...	...	...	...	...
13	4·31	151	35	...	...	...	...	...	...	2·64	157	59	...	...	...	6·70	139	21
14	2·20	142	65	...	...	...	...	...	...	...	...	...	4·22	174	42	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	5·52	178	32	...	...	...
17	...	...	...	2·29	145	63	...	...	...	2·40	155	65	...	...	...	...	...	...
18	2·38	201	84	2·42	88	36	3·26	175	54	2·46	142	58	...	...	...	...	...	...
19	2·32	173	75	...	...	...	2·39	126	53	...	...	...	...	...	...	10·56	201	19
20	2·32	146	63	...	...	...	2·53	190	75	2·61	155	59	5·40	172	32	8·68	186	21
21	2·50	154	62	3·63	157	43	3·27	214	65	...	...	...	5·37	172	32	...	...	...
22	...	...	...	2·63	184	70	3·10	169	55	...	...	...	3·39	120	35	...	...	...
23	...	...	...	2·85	105	37	...	...	...	2·96	120	41	5·52	107	19	...	...	...
24	1·77	121	68	3·08	125	41	...	...	...	...	...	...	4·49	121	27	...	...	...
25	...	...	...	2·81	128	46	...	...	...	...	...	...	...	...	...	...	...	...
26	1·69	126	75	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27	1·79	138	77	...	...	...	2·63	173	66	...	...	...	4·87	109	22	...	...	...
28	3·44	175	51	...	...	...	2·53	221	87	...	...	...	...	...	...	6·02	188	31
29	...	...	...	1·80	88	49	...	...	...	...	...	...	6·11	224	37	4·52	109	24
30	...	...	...	...	...	...	...	...	...	...	...	...	4·41	156	35	...	...	...
31	1·69	147	87	1·63	126	77				...	...	...				...	...	...
Mean	2·31	146	67	2·33	122	54	2·69	163	61	2·82	148	54	4·68	154	33	6·52	141	22
No. of days used	19	19	19	14	14	14	12	12	12	9	9	9	14	14	14	10	10	10

Year:				
Mean	3·55	154	49
No. of days used	158	157	157

SMOKE CONCENTRATION IN THE AIR

40 KEW OBSERVATORY — Complete days only — 1967

	Hour GMT 0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	10 to 11	11 to 12	12 to 13	13 to 14	14 to 15	15 to 16	16 to 17	17 to 18	18 to 19	19 to 20	20 to 21	21 to 22	22 to 23	23 to 24	Mean	No. of days used
	micrograms per cubic metre																									
Jan.	57	48	41	33	32	*30*	31	38	58	61	59	47	47	47	53	56	68	84	*86*	80	79	82	69	62	56	27
Feb.	53	47	42	40	42	41	42	49	62	67	66	42	38	*34*	35	38	46	63	*78*	77	76	75	68	60	53	27
Mar.	17	15	12	11	*11*	12	14	17	19	15	11	12	14	14	15	15	18	22	26	*30*	30	28	26	21	18	31
Apr.	23	21	18	*17*	18	20	28	32	33	27	22	19	20	20	20	22	25	27	31	*33*	32	31	30	26	25	30
May	14	14	13	14	14	14	19	21	18	15	15	14	12	*12*	14	12	13	14	17	18	21	*22*	19	17	16	31
June	20	20	18	16	16	22	22	*26*	24	22	19	17	17	15	14	15	15	*14*	14	17	18	18	17	18	18	30
July	12	12	14	12	13	14	18	19	*20*	18	16	12	12	11	11	11	*10*	12	11	12	13	13	13	14	13	31
Aug.	20	17	16	15	16	*15*	19	23	25	23	21	16	17	17	18	18	19	20	20	24	*25*	22	20	21	19	31
Sept.	23	20	18	*17*	19	22	31	*34*	33	25	22	17	19	19	18	19	23	26	31	32	31	30	30	27	24	30
Oct.	13	11	10	10	*10*	12	18	24	27	22	20	14	17	18	19	21	25	32	*37*	36	31	27	24	16	21	31
Nov.	59	54	45	39	*36*	39	39	46	67	79	71	62	66	41	39	50	64	79	90	*98*	89	73	73	65	61	30
Dec.	37	34	33	*28*	30	30	32	42	59	68	70	58	60	57	60	65	74	*76*	71	67	64	59	51	43	53	31
Year	29	26	23	21	21	23	26	31	37	37	34	27	28	25	26	29	33	39	43	44	42	40	37	33	**31**	360
Winter	51	46	40	35	35	35	36	44	61	69	**67**	52	53	45	47	52	63	75	81	81	77	72	65	57	56	115
Spring	20	18	15	14	15	16	21	25	26	21	17	15	17	17	17	19	21	25	29	31	31	29	28	23	21	61
Autumn	18	15	14	13	15	17	25	29	30	23	21	15	18	19	19	20	24	29	34	34	31	29	27	21	23	61
Summer	17	16	15	14	15	16	19	22	22	19	18	15	15	14	14	14	14	15	15	18	19	19	17	17	17	123

Note: There are some small systematic differences, averaging about 2 microgrammes per cubic metre, between the smoke pollution data in Table 40 and the data for April-December 1967 in the corresponding Table published by Warren Spring Laboratory in *The Investigation of Air Pollution; National Survey Annual Summary* Table 1. This is due to a small difference in numerical procedure; the reflectance of the smoke stain is measured at Kew to the nearest half unit, and this has been used in the calculations for the *Observatories' Year Book* data. At Warren Spring Laboratory the usual practice is to measure reflectances to the nearest unit only, and the half units in the Kew data have been ignored. The difference between the two sets of data is only of the same order as the probable accuracy of the results.

The data for this Table 40 (and the corresponding Table in the *Observatories' Year Book* 1966) are given in microgrammes per cubic metre to the nearest whole unit. In the *Observatories' Year Book* 1963 and in those for earlier years, the data were in milligrammes per cubic metre, to the nearest 0·01; in the *Observatories' Year Books* 1964 and 1965, the data were in microgrammes per cubic metre rounded to the nearest 10. The change from milligrammes per cubic metre to microgrammes per cubic metre was made to bring the data into line with those published by Warren Spring Laboratory for the remainder of the United Kingdom.

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Dd. 143374 250 7/69